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HANDBOOK

OF THE

ARTS OF THE MIDDLE AGES AND RENAISSANCE.

Now Ready, with 1000 *Illustrations on Wood,* 2 *Vols.* 8*vo,*

THE ILLUSTRATED HANDBOOK OF ARCHITECTURE.

BEING

A CONCISE AND POPULAR ACCOUNT OF THE DIFFERENT STYLES OF ARCHITECTURE PREVAILING IN ALL AGES AND COUNTRIES.

BY JAMES FERGUSSON, F.S.A.

JOHN MURRAY, ALBEMARLE STREET.

Fig. 150. Chamfron of the horse-armour of Christian II. Historical Museum, Dresden.

HANDBOOK

OF THE

ARTS OF THE MIDDLE AGES AND RENAISSANCE,

AS APPLIED TO THE DECORATION OF FURNITURE, ARMS, JEWELS, &c. &c.

TRANSLATED FROM THE FRENCH OF

M. JULES LABARTE.

WITH NOTES, &c.—COPIOUSLY ILLUSTRATED.

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JOHN MURRAY, ALBEMARLE STREET.
1855.

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PREFACE.

It is only of late years that archæologists have understood that Art is exhibited, not only in architecture, statuary, and monumental painting, but that ecclesiastical utensils, arms, jewels, furniture, and even objects of common use, all equally bear testimony to the artistic talent of ancient times, and afford as irrefragable evidence of the character of the epoch in which they were made.

It is of Art—as applied to the objects of domestic life—that this volume treats. It was originally written as an introduction to a descriptive catalogue of the Debruge-Dumenil Collection, of which M. Jules Labarte, its accomplished author, was coinheritor. It gives a complete history of the origin and development of the decorative arts during the Mediæval and Renaissance periods; and, as we have no work in English on the same subject, and the French catalogue has been long out of print, it has been thought that a translation, divested of the references to that well-known Collection, would be of interest and use.

The work of M. Labarte deserves on every account to be

known and circulated. Its value is already fully acknowledged by French antiquaries and artists. As M. Didron observes, "C'est une véritable histoire de l'art par les objets mobiliers, dont M. de Labarte vient d'enrichir la science archéologique. Il y a peu de livres où plus de faits certains et intéressants abondent que dans celui-ci;" and M. de Laborde most truly says, "L'ouvrage de M. Labarte est dans toutes les mains; il serait inutile d'en faire l'éloge; il est dans toutes les bouches."

The translator has to express her grateful acknowledgments to M. Labarte for the use of the wood-cuts belonging to his work, and also to Lord Londesborough, the Executors of the late Mr. Bernal, to Mr. Franks, and Mr. Apsley Pellatt, for a liberality, to which she is indebted for many of her most interesting illustrations.

LIST OF ARTISTS MENTIONED IN THE WORK.

ABBREVIATIONS.

Arch. *architect;* arm. *armourer;* cabm. *cabinet-maker;* call. *calligrapher;* cha. *chaser;* clockm. *clock-maker;* dam. *damascener;* draughtsm. *draughtsman;* enam. *enameller;* eng. *engraver;* Flem. *Flemish;* Flo. *Florentine;* Fr. *French;* Gk. *Greek;* Ger. *German;* glassm. *glass-maker;* golds. *goldsmith;* iv. *ivory;* It. *Italian;* ker. *keramics, keramist;* lap. *lapidary;* locks. *locksmith;* marq. *marquetry;* mod. *modeller;* paint. *painter;* sculp. *sculptor;* Swe. *Swedish;* Ven. *Venetian.*

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DESCRIPTION OF THE WOODCUTS.

Fig. 1. *Ivory chair of St. Maximian.* At Ravenna. VIth century.

This chair is now placed in a closet in the sacristy of the metropolitan church at Ravenna, of which it formerly decorated the presbytery. It is entirely overlaid with tablets of carved ivory. The monogram in front of the seat, refers this remarkable work to the time of the Archbishop Maximian, whose portrait is in the mosaic of the apsis of the basilica of St. Apollinaria-in-Classe, and in that of San Vitale (See fig. 39), both of which churches he consecrated; the first in 549, the second two years earlier. This same prelate also adorned the church of St. Stephen, now destroyed, with rich mosaics, and with curtains for the altar, upon which were represented the miracles of our Saviour.*

Fig. 2. *Abbey of Lorsch,* in the Bergstrasse.

The portico or gate-house here represented is in the late, debased Roman style, such as we find at that period when the traditions of Roman art were not entirely lost.

Fig. 3. *Martha and Mary advancing to the Saviour.* Sculpture of Xth or XIth century, from Selsey, now in Chichester Cathedral.

Fig. 4. *The raising of Lazarus.* Sculpture, IXth or Xth century. (Chichester Cathedral.)

Fig. 5. *Oliphant.* XIVth century. Coll. Soltykoff. (Described p. 10.) Du Sommerard. *Album* 4e serie, pl. 26. (No. 154 Debruge-Labarte Collection.)

Fig. 6. *Ivory diptych of the Consul Clementinus.* Of Greek workmanship. VIth century. (Coll. Fejérváry.)

He is represented seated on a curule chair between the figures of Rome and Constantinople, holding the map of the Circus, and giving with it the sign for the beginning of the games. Above him, are his signet, his name and title, surmounted by a cross and portraits of the emperor Anastasius and the empress Ariadne. Under him, two boys emptying bags of presents, viz., coins, diptychs, and palm branches. At the time of the later emperors, the consuls had no other public duty than to give feasts to the people, and a name to the year. Clementinus was consul of the East, A.D. 513. The inside of this diptych contains the old Greek liturgy, engraved into the tables in the first year of Pope Adrian I., A.D. 778. This diptych, which has been published by Gori, D'Agincourt, and all the authors treating upon this class of monument, is known as the "Diptychon Nigelinum," it having remained for two centuries in the possession of the patrician family Nigelien in Nuremberg, whence it passed into the collection of Count Wiczay, and subsequently into that of the late M. Fejérváry.†

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* Du Sommerard. *Les Arts au Moyen Age.* Album, 1er sér, pl. ii.

† Catalogue of the collection of Monuments of Art formed by the late Gabriel Fejérváry, of Hungary, described by Dr. E. Steuszlmann.

Fig. 7. *Ivory Archangel.* British Museum.

The leaf of a diptych of the IVth century.

Fig. 8. *Statue-painter.* From a miniature of the XVth century. (Imp. Lib., Paris.)

A female artist is represented in the act of painting a statue of the Virgin. The subject is interesting, as showing us the implements used at that period in painting. The artist holds a pencil or brush in her right hand, and a palette with a handle in her left, thus affording incontestable evidence that the palette was used in France in the XVth century, and this is perhaps the earliest notice of this implement known. On a bench by her side, are placed the colours, mixed in shells as described by Alcherius and other writers, and also her brushes in a tray, and a second palette with a handle.*

Fig. 9. *Birth of St. John.* Carving in speckstein, by Albert Dürer. XVIth century. British Museum. (Payne Knight's Collection.)

Fig. 10. *Ecce Homo.* Ivory carving. XVIIth century.

Fig. 11. *Ivory tankard,* after Rubens or Jordaens. XVIIth century. (Marlborough House.)

Fig. 12. *Ivory knife and sheath of Diane de Poitiers.* XVIth century. In the Collection of Lord Cadogan. Described, p. 36. (No. 176 Debruge-Labarte Collection.)

Fig. 13. *Shrine of St. Sebald,* by Vischer. XVIth century. Nuremberg. Begun in 1506, and finished in 1519.

For this great work of art, Vischer was miserably paid, receiving only 770 florins for his thirteen years of labour. He has himself recorded in an inscription upon the monument that "he completed it for the praise of God Almighty alone, and the honour of St. Sebald, Prince of Heaven, by the aid of pious persons, paid by their voluntary contributions." There are seventy-two figures in this monument; Syrens hold candelabra at the angles, and it is supported at the base by huge snails. The centre has an air of singular lightness and grace.

Fig. 14. *Copper crucifix.* XIIth century. Coll. Soltykoff. (No. 332 Debruge-Labarte Collection.)

Copper enamelled and gilt.† The Saviour is not clothed in the long Byzantine robe of the XIth century, but in a tunic descending to the knees, in which he is represented till the XIVth century. His feet are not crossed or nailed, but rest on a tablet (*suppeditanum*) which a third nail fixes to the cross.‡ The cross is made of trunks of trees, with the branches lopped off, a form more favourable to sculpture than the squared timber of later times.§ At the foot of the cross, are the three

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* Merrifield's *Ancient Practice of Painting,* vol. i. p. cvii.

† Incorrectly stated p. 41, to be of bronze.

‡ Before the XIIIth century Jesus was attached to the cross by four nails—one to each hand and foot. In consequence of some anterior discussions, the feet from this period were placed over each other and attached by a single nail, it having been settled that three nails only were used at the crucifixion. Cimabue is said to have been the first painter who adopted this arrangement. This crucifix (Fig 14) was made at the end of the XIIth century, when the four nails had been rejected, but the feet had not been superposed, so to get rid of the difficulty, the third nail is here attached to the tablet which supports the feet.

§ The cross of Calvary was a tree, and therefore was painted green. In the painted window in the apsis of St. Denis near Paris, in another in the Sainte Chapelle, in the cathedrals of Bourges, Chartres, Rheims, and in the miniatures of manuscripts, the cross is a tree with the branches lopped, and covered with a greenish bark, and the round tree covered with bark and stripped of its branches is also sculptured in the porch of Notre Dame at Rheims. The green colour was retained even after the cross had been

archangels, who, with outspread wings, encircle the tree of redemption. Each of them holds a medallion, upon which is inscribed his name in Hebrew, with the Latin translation, recalling his office with the Most High.

Michael quis ut Deus.
Gabriel fortitudo Dei.
Raphael medicina Dei.

The two medallions attached to the branches of the cross represent, one, a youth resting his head upon his left hand and holding a lighted torch in his right; the other a woman attired in a veil surmounted by a crescent: these two figures symbolising until the end of the XIIIth century the darkness that covered the earth, the moon and sun giving no light at the death of the Saviour. The inscription "Lignum domini" engraved upon a sliding door in the tunic of Christ, shows that this crucifix served as a reliquary to contain a fragment of the true cross, introduced by this aperture into the body. The heads of our Saviour and the archangels are coarsely treated, but these faults are compensated by the elevation of the composition. The messengers of the Eternal seated at the foot of the cross, are placed there to attest that the Crucified has not ceased to be the Lord of the Universe, whose immutable decrees they are ready to execute.

Fig. 15. *Tomb of Albert Dürer.* XVIth century. Nuremberg.

Each grave is numbered, and that of Albert Dürer is marked 649.

Fig. 16. *Medal of the Emperor Charles V.* In silver. Executed by H. Reitz, of Leipsic, 1537.

The emperor is represented wearing a cap. He is decorated with the collar of the Golden Fleece, and holds the sceptre and orb. On the reverse are the two-headed imperial eagle, with an escutcheon of the emperor's arms hanging from his neck, and the two columns of Hercules with the motto "Plus oultre." Below, H. R., the monogram of the engraver.

Fig. 17. *Sword-handle.* By Leigeber. XVIIth century. Historical Museum, Dresden.

Fig. 18. *Charles II., as St. George.* By Leigeber. XVIIth century. Historical Museum, Dresden.*

Fig. 19. *Metal powder-flask, in repoussé and appliqué work.* End of XVIth century.

Of triangular form, and partly gilt. A knight in ancient armour rides over two fallen warriors. In the Collection of Lord Cadogan. (No. 379. Debruge-Labarte Collection.)

Fig. 20. *Spanish breast-plate.* XVIth century. (No. 2420 Coll. Bernal.)

Of russet steel, damascened and inlaid with gold and silver, beautifully chased and embossed with figures, trophies, &c. Date, about 1560.

Fig. 21. *Ancient cameo mounted in the time of Charles V.* XIVth century. Cabinet of medals, Imp. Lib., Paris. Described page 232.

Fig. 22. *Sardonyx ring with cameo head of Queen Elizabeth.* In the possession of Rev. Lord John Thynne. Described p. 55.

A cameo head of Queen Elizabeth on an onyx of three colours decorates a sardonyx cup in the Louvre (No. 577), and there is one in the Museum at Marlborough House. Valerio Vicentino was in England in the reign of Elizabeth. Horace Walpole mentions † several cameos of the queen executed by him, among others one which was

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stripped of its bark, and squared by the axe of the carpenter. Didron, *Iconographie Chrétienne.*

* Incorrectly stated, p. 46, to be in the Chamber of Arts.

† Anecdotes of Painting, vol. i. p. 276. He also quotes from the Harl. MS. a list of jewels belonging to Queen Elizabeth—"a flower of gold garnished with sparkes of diamonds, rubyes, and ophals, with an agath of her majesty's visnomy, and a perle pendante." This cameo was probably the work of Vicentino.

in the Strawberry-hill collection, a jewel (No. 61, 15th day) on which were the heads of this queen on sardonyx, and of Lord Burleigh affixed to the reverse of an antique onyx intaglio of Caracalla; both executed by Valerio Vicentino.

Fig. 23. *Painted tournament saddle.* XVIth century. Royal Armoury, Madrid.

Fig. 24. *The Annunciation.* Missal of the XIVth century.

Each miniature is bordered with foliage executed in gold and colours, and covered with birds and butterflies. Below the inscription are two little angels singing and accompanying themselves; the one on the psalter, the other on the guiterne (No. 643 Debruge-Labarte Collection.)

Fig. 25. *From a Missal of the XVth century.* Executed for J. Juvenal des Ursins, Archbishop of Rheims, † 1456.

His father took the name of "des Ursins" from the house of that extinct family, given to him by the City of Paris in consideration of his services.

Fig. 26. *A writer, "peintre caligrafe."* XVth century, from a MS. in the Imp. Lib., Paris.

Fig. 27. *St. Anthony.* German painted glass. XVth century. (Coll. Soltykoff.) The back-ground is damasked red and blue.

Fig. 28. *Coronation of the Virgin.* Early Cologne School. From the Boisserée Collection, now at Nuremberg.

This painting is of the school of Meister Stephen. It is preserved in the chapel of St. Maurice, which is now converted into a picture gallery, and contains an interesting collection of the early German and French schools chronologically arranged.

Fig. 29. *Workshop of a painter of the XVth century.* From a MS. in the Imp. Lib., Paris.

In his right hand he holds a brush, with which he is painting a picture of the Virgin and Child, which, from being framed, suggests the idea of being painted on canvas. The picture is placed upon an easel supported by three legs. In the background is a man grinding colours; in the foreground a low table on which are shells of various kinds containing colours, and a tray full of brushes. The long flowing sleeves of the painter, and the pointed shoes of the colour-grinder, assist in giving the date of the drawing.*

Fig. 30. *The Virgin Mary.* Attributed to Hubert van Eyck. XIVth century. Part of the altar-piece of the Adoration of the Lamb, Ghent. Painted by John and Hubert van Eyck for the Church of St. John (now St. Bavon) at Ghent.

This is the most celebrated work of the two brothers. Hubert, it is said, designed the whole, but died before its completion. The figure of the Virgin is one of the large pictures of the centre, and is painted on gold. In her countenance we find a serene grace and purity of form which approach very nearly to the happiest efforts of Italian art, and is surpassed only by some of the Madonnas of Raphael. This altar-piece was taken to Paris by Napoleon, and part of it only restored. Six of the paintings of the wings are at Berlin.

Fig. 31. *Shrine or reliquary of St. Ursula.* By Hans Hemling, XVth century. In the Chapel of the Hospital of St. John, at Bruges.

Fig. 32. *Martyrdom of St. Ursula.* One of the paintings on her shrine by Hemling.† XVth century. Chapel of the Hospital of St. John, Bruges.

This celebrated shrine is about four feet long, and is decorated on the whole

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* Merrifield's *Ancient Practice of Painting*, vol i, p. cviii.

† For a notice of Hemling and his works, see Kugler, *Handbook of Painting, German, &c. Schools*, p. 83.

exterior with miniatures in oil by Hemling; on each side of the cover are three medallions. On one gable end is the Virgin and Child, on the other St. Ursula and the Virgins, who seek her protection under her outspread mantle. On the longer sides, in six compartments, is painted her history. Fig. 32 represents her martyrdom. She and two virgins are in the tent of the emperor Maximian. A soldier has already aimed his arrow, and she awaits her death with cheerful resignation. These little pictures are among the best productions of the Flemish school; they are stated to have been presented by Hemling to the hospital out of gratitude for the services he received when a patient. Offers are said to have been made to exchange this shrine for one of solid silver of the same size.

Fig 33. *Adoration of the Trinity.* Albert Dürer. XVIth century. In the Belvedere at Vienna.

Fig. 34. *The Salutation.* Part of a domestic painting by Lucas of Leyden. XVIth century. (Collection of M. Fould at Paris.)

This picture, with wings, is painted on wood, and consists of twenty-four subjects illustrative of the Life of Christ, containing 280 figures (No. 550 Debruge-Labarte Collection.)

Fig. 35. } *William and Harold.* From the Bayeux Tapestry. XIth century. In the
Fig. 36. } Public Library at Bayeux.

Fig. 37. **Mitre of Thomas à Becket.* Cathedral at Sens.

The most curious object there preserved. It appears to be the "mitra auriphrygiata" of the Roman ceremonial, formed of gold and embroidery without any gems or ornament of gold and silver. The early double-pointed mitres were very low, the apex forming a right angle. It is adorned with that remarkable symbol, frequently introduced in the vestments of the Greek church, formed of a combination of the letter gamma four times repeated, termed "Gammadion," a symbol retained in later times as an heraldic charge under the name of "fylfot," a term hitherto unexplained.†

Fig. 38. *King Henry VI. attended by Cardinal Beaufort, the Duke of Gloucester, and Courtiers.* From the tapestry in St. Mary's Hall, Coventry.

Fig. 39. *Justinian and Theodora.* Mosaic of the VIIIth century. Church of San Vitale, Ravenna. Later Roman style.

On the perpendicular wall of the apsis appear two large ceremonial representations, upon a gold ground, the figures as large as life. In splendid attire, laden with the diadem and a purple and gold embroidered mantle, fastened with a monstrous fibula, is the emperor advancing, his hands full of costly gifts. To him succeed a train of courtiers, and next his fair-haired Germanic body-guard. Archbishop Maximian (see Fig. 1), with his clergy, advance to meet him. Opposite is the Empress Theodora, surrounded by the ladies of her court, in gorgeous attire, in the act of entering the church. Theodora is clad in the purple imperial mantle, and from her grotesque-looking diadem hang a profusion of beads and jewels, surrounding a nervous, pale face, in which we read the whole character of this clever but merciless woman. Justinian and Theodora are distinguished by the nimbus. A chamberlain before the empress draws back a richly embroidered curtain, so as to exhibit the entrance court of a church, symbolised by a cleansing fountain.‡

Fig. 40. *Christ enthroned with the Virgin.* Mosaic. Circ. 1300. Tribune of Santa Maria Maggiore, Rome. By Giacomo Toriti.

Surpassed by no contemporary work in dignity, grace, and decorative beauty. On a blue, gold-starred ground, is seen the Saviour and Virgin. The forms are pure and

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* In the text (beginning at p. 89), Figs. 36 to 40, should be numbered 37 to 41.
† It is to be seen on the fine effigy of Bishop Edindon at Winchester.
‡ Kugler. *Handbook of Painting in Italy*, p. 35.

noble, the execution careful. On each side are adoring angels, with St. Peter, Paul, the two Johns, Francis, and Anthony, advancing. The upper part is filled with graceful branches of vine, filled with symbolical animals; beneath the Jordan, and again below, four scenes from the life of Christ. Romanesque style.*

Fig. 41. *The Navicella.* Mosaic, partly after the designs of Giotto. XIVth century. Vestibule of St. Peter, Rome. Executed about 1340.

A ship with the disciples upon a troubled sea; the winds, personified in human shape, storm against it. Above appear the Fathers of the Old Testament, speaking comfort to the sufferers. According to the early Christian symbolisation, the ship denoted the Church. On the right is the Saviour, the Rock of the Church, raising Peter from the waves. Opposite, stands a fisherman, in tranquil expectation, denoting the hope of the believer. This mosaic has frequently changed its place, and has undergone so many restorations, that the composition alone can be attributed to Giotto.†

Fig. 42. *Broken silver vase, the letters engraved in niello.* IVth or Vth century. Discovered near Mount Esquinal, 1793. The inscription is "Pelegrina. utere. felix." (D'Agincourt. Sculp., pl. ix.)

Fig. 43. *Silver vase, chased and damascened with figures and arabesques.* IVth or Vth century. Discovered near Mount Esquinal, 1793. (D'Agincourt. Sculp., pl. ix.)

Fig. 44. *The Crucifixion.* Copperplate engraved, enamelled and gilt. Probably forming, with Fig. 44, part of a book-cover. End of XIIth century. (Coll. Soltykoff.)

Fig. 45. *Abel and Melchisedec.* Engraving on copper, decorated in the same manner as Fig. 44. End of XIIth century. (Coll. Soltykoff.)

The subjects of these two plates refer to the triumph and death of Christ. The centre is divided into three pictures; in the middle the Crucifixion (Fig. 43), below, an angel proclaims the Resurrection, above, the Ascension. In the picture of the Crucifixion, the female figures on the right and left of the Cross represent respectively the Church and the Synagogue. The Church is figured with a nimbus, her eyes raised towards the Saviour. In one hand she holds a pennon, in the other she bears a cup, or the "graal,"‡ to receive the blood which flows from the Saviour's side.§ The Synagogue is represented without the nimbus, her head drooping, she has a banner of three points, the shaft of which is broken. The Virgin and St. John stand on each side of the Cross.

Round this central picture are arranged, four on each side, the sixteen persons of the Old Testament who have symbolised the advent and passion of Christ. Abel, the first martyr, opens the way; he bears in his arms the lamb he is going to offer in sacrifice; next comes Melchisedec, in the costume of a Frankish king, the short tunic, the mantle clasped before, and the crown with three perpendicular flowers. Abraham, Isaac, Noah, Jacob, &c., follow in succession, each with an appropriate text or inscription.

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* Kugler. *Handbook of Painting in Italy*, p. 114. † Ibid. p. 126.

‡ The "graal" is the cup so celebrated in mediæval legends. It was used, it is said, at the last supper; it was the vessel in which Jesus turned the water into wine, and in it Nicodemus, or Joseph of Arimathea, received the Saviour's blood at the crucifixion. Subsequently the "graal" was claimed by the Genoese; it passed, under Napoleon, to Paris, and is since restored to Genoa, where it is kept in the treasury of the cathedral under the name of the "Sacro Catino." This precious cup, of glass, and not of emerald, as asserted, is of hexagonal form, with two handles; it is three feet 9 inches in circumference, and was accidentally cracked in its journey from Paris to Genoa. Didron, *Iconographie Chrétienne.*

§ Showing that the Church is in possession of the true sacrifice. Sometimes the Church is veiled; the Synagogue always has the eyes bandaged, a biblical type, sometimes a crown falling from her head; commonly she has no mantle.

Fig. 46. *Crosier.* From an engraving by Israel Van Meckenen. XVth century. A beautiful specimen of the most florid Gothic.

Fig. 47. *Byzantine pectoral cross.* Coll. A. B. Hope. (No. 661 Debruge-Labarte Collection.)

This singular cross consists of two cruciform plates of gold, enamelled and set in silver gilt, united by a hinge, thus forming a box or reliquary. The setting appears more recent than the enamel, and is omitted in the woodcut. On one of the sides Christ is represented on the cross, his head encircled with a cruciform nimbus, his beard black, his feet nailed separately to the under tablet that supports them. Over his head is placed his monogram. The presence of the Father is indicated by the letter Π (initial of Πατηρ). At the foot of the cross is, according to Greek custom, the skull of Adam (in whose tomb the cross was fixed at Golgotha). In the right branch is placed the bust of the Virgin, in the left that of St. John, with the Saviour's address, "Behold thy son, &c.," inscribed. On the other side, is a full-length figure of the Virgin; above, St. John the Baptist; below, St. Paul; St. Peter, and St. Andrew, on the right and left. The fillets of this enamel are about one-ninth of an inch in width, and are slightly attached by their edges to the back of the plate. The form of the letters, the character of the figures, and the style of the piece, denote Byzantine workmanship, M. Labarte says of the Xth, M. de Laborde of the XIIth century.

Fig. 48. *Chalice of St. Remi.* XIIth century. Imperial Library, Paris.

This incomparable example of the skill of the XIIth century is 6⅛ inches high by 5⅛ in diameter. The inscription, which forms two lines round the foot of the chalice, denounces an anathema on any one who should abstract it from the cathedral of Rheims. The fine preservation of this cup is remarkable, especially as it lay for some time in the Seine, having been part of the plunder taken from the Cabinet of Medals a few years since.

Fig. 49. *Crown of Charlemagne.* IXth century. Imperial Treasury, Vienna. Composed of a mixture of cloisonné and champlevé enamels. Described, p. 113.

Fig. 50. *Sword of Charlemagne.* IXth century. Imperial Treasury, Vienna. Described, p. 114.

Fig. 51. *Shrine of the Magi.* Cathedral Cologne. XIIth century.

The central subject is the Virgin with the Infant Jesus; on the left, the Adoration of the Three Kings, accompanied by the Emperor Otho IV. On the right, the Baptism of Christ by John the Baptist in presence of an angel. All these figures are of pure gold, in full relief. The architectural decorations are covered with enamels and precious stones. Above these figures is a cover of silver-gilt, on removing which the skulls of the three kings are seen, with their names, Gaspar, Melchior, and Balthazar, traced in rubies. The crowns of copper gilt replace those of massive gold, which disappeared during the revolutionary storms. They weighed each six pounds, and were enriched with fine pearls and an aigrette of diamonds. Above the relics is the figure of Christ as the judge of men, between two angels who hold the instruments of the passion. This reliquary is 5½ feet long by 3 wide, 5 feet high; it was begun in 1170.

Fig. 52. *Shrine.* Champlevé enamel. XIIth century. (Coll. Soltykoff.)

In the form of a tomb, with prismatic cover. On the top is represented the Entombment; Joseph of Arimathea, Nicodemus and another, Mary Magdalen, and Mary, the mother of Jesus. Below, the Resurrection. The three Marys are directing their steps to the sepulchre, on which a winged angel is seated, the two guards asleep. The figures are finely chased on the gilt metal ground, the heads projecting above the enamel. At each end is an apostle on a blue enamel ground.

Fig. 53. *Portrait of Geoffrey Plantagenet.* Champlevé enamel. XIIth century. Museum. Le Mans.

Geoffrey le Bel, Duke of Normandy, Count of Anjou and Maine, was father of Henry II. He died at Château-du-Loir, 1151. This plaque, a kind of votive picture, was placed in the church in memory of the deceased, and affixed to the column at the foot of which he was interred. It is peculiar for the water-green colour which pervades the diapered ground. The character of the design is solemn, the French style still under Byzantine influence. The carnations are rendered by a pink enamel; the eyes are light blue. The armorial bearings were then those of the House of Anjou.*

Fig. 54. *Essex vase.* Found in the Bartlow Hills, and destroyed by fire at Little Easton, Lord Maynard's.

This beautiful vase is about 3¾ inches high, and 4¾ inches diameter. It is enamelled throughout in green, red, and blue.

Fig. 55. *Gold ring of Ethelwulf, King of Wessex.* IXth century. British Museum.

This ring is decorated with a bluish, black enamel, firmly incorporated into the metal by fusion, what is termed "émail de niellure" by M. de Laborde,† who considers the character of the design and ornament to be Saxon, and that there is every reason to suppose it to have been the work of a Saxon artist.

Fig. 56. *Enamelled châsse, representing the Virgin and Child, and Apostles.* XIIth century. British Museum.

Fig. 57. *Candlestick.* Champlevé enamel. XIIIth century. British Museum.

Fig. 58. *Enamelled plate, representing Henry of Blois, Bishop of Winchester, and Brother of King Stephen.* XIIth century. British Museum.

This roundel is 7 inches in diameter. On the upper half is represented a bishop prostrate, and carrying a large rectangular object in his hands. Under this figure are the words HENRICVS EPISCOPVS. On the lower half of the plate are two angels with censers. Round the margin are two lines of inscriptions, which Mr. Franks thus translates: "Art is above gold and gems: the Creator is above all things. Henry, while living, gives gifts of brass to God; whom (equal to the Muses in intellect, and superior to Marcus in oratory) his renown makes acceptable to men, his morals to the gods above." The other runs thus: "The servant sent before, fashions gifts acceptable to God: may an angel carry up to heaven the giver after his gifts. Let not England, however, hasten this event, or excite grief: England, to whom peace or war, movement or quiet, come through him." This plate records the gifts of a Henry, Bishop of Winchester, upon whom the destinies of England rested. It must, therefore, have been made in the reign of Stephen, 1135—1154, when the bishop's influence alternately caused Stephen or Matilda's party to triumph. Mr. Franks attributes this piece to the Rhenish school of enamellers.‡

Fig. 59. *Painted enamelled Ewer.* By Pierre Raymond. XVIth century. (No. 710 Debruge-Labarte Collection.)

Subject, the Triumph of Venus. The goddess is represented in a car, drawn by four stags. Cupids, and dogs, in her train. In grisaille, heightened with gold. Carnations tinted. Height 10 inches.

Fig. 60. *Casket, decorated with Limoges enamels in grisaille, representing the Sybils.* (No. 1565 Coll. Bernal.) Heightened with gold.

The five plaques are mounted in silver gilt, embellished with gems and cameos. Height, 4½ inches by 5 feet long.

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* Du Sommerard, *Album*, x., pl. 12.

† *Notice des émaux, bijoux et objets divers du musée du Louvre*, p. 86.

‡ Archæological Journal.

Fig. 61. *Cabinet damascened in gold and silver.* Italian work of the XVIth century. (Coll. Rothschild.)

All the statuettes are in bronze, the carnations silvered, the vestments gilded. The shafts of the columns are of silver, the bases and capitals gilt. (No. 823 Debruge-Labarte Collection.)

Fig. 62. *Iron toilet-glass, damascened in gold and silver.* Italian work of the XVIth century. (Coll. Soltykoff.) Decorated in the same style as 61.

The lower part of this forms a box; the glass is covered with a sliding panel, the back, represented in the woodcut, forms an architectural façade. (No. 820 Debruge-Labarte Collection.)

Fig. 63. *Vase of rock-crystal.* Mountings of silver-gilt, chased and enriched with cameos and precious stones. Coll. Rothschild. XVIth century. (No. 824 Debruge-Labarte Collection.)

Fig. 64. *Ancient agate drinking vessel, usually styled the Vase of Ptolemy.* Mounted in gold, and enriched with precious stones, given by Charles III. (the Simple) to the Abbey of St. Denis, now in the Imp. Lib., Paris, but without the gold mounting.

This is a carchesium, a name given to the goblet peculiar to Bacchus, and found sometimes in antiques, in his own hand. The carchesium has a shallow foot, wider than it is deep, with handles rising over the edge and reaching to the foot; it is one of the oldest forms of goblet known. Fig. 64 represents the mysteries of Bacchus and Ceres. It is the cup out of which the queens of France used to drink the wine of consecration on their coronation.

Fig. 65. *Sardonyx ewer.* XVIIth century. Museum of the Louvre. Mounted in gold, enamelled and enriched with precious stones.

The ewer is surmounted by a head of Pallas, the helmet of onyx, with a winged dragon for crest. The handle is formed by a winged dragon of pale green, the wings diapered, the tongue made to move. (No. 587 Louvre.)

Fig. 66. *Cup of lapis-lazuli.* XVIth century. Mounted in gold, enriched with rubies and a statuette in enamelled gold.

The cup is ornamented with gadroon sculptures on the body and stem. The figure holds a phylactery, upon which is inscribed "Da guerra esce pacè." (No. 826 Debruge-Labarte Collection.)

Figs. 67, 68, 69, 70. *Vessels of silver, probably used as cruets.* IVth century. Vatican.

Fig. 71. *Iron Crown of the Lombards.* Cathedral, Monza.

6 inches diameter, 2¼ high; it served at the coronation of Napoleon, at Milan, when he placed it on his own head, saying, "Dio me la diedo, guai a chi la tocca!" words which afterwards became the motto of the order of the Iron Crown.

Fig. 72. *Crown of Agilulph.* VIth century. Described p. 205. Probably a votive crown.

Fig. 73. *Chair or throne of Dagobert.* VIIth century. Imp. Lib., Paris.

It was upon this chair that Napoleon, in August, 1804, distributed the crosses of the legion of honour to the soldiers of the army assembled at Boulogne for the invasion of England. Napoleon caused the chair to be brought from Paris for the express purpose.

Fig. 74. *Golden altar frontal of Bâle.* XIth century. Musée de Cluny. Described, p. 216.

Fig. 75. *Silver reliquary head or "chef."* From the Cathedral at Bâle. XIth century. British Museum.

Fig. 76. *Reliquary, châsse.* Copper-gilt. XIIth century. Coll. Soltykoff. (No. 951 Debruge-Labarte Collection.)

Fig. 77. *Candlestick.* XIIth century. Musée de Cluny.

In copper, cast and slightly chased. The winged dragons which twist themselves among the branches issuing from the lions' mouths, and the lizards which support the socket, all belong to the romanesque style, which is short and thick.

Fig. 78. *Copper censer or thurible.* XIIth century. Lille.

Fig. 79. *Episcopal ring.* Gold, with sapphire. French work of XIIth century. (Coll. Londesborough.)

The stone, an irregular pentagon, is secured in the collet by four projecting clamps, "à griffes," and the shank, which is triangular, bears on the outside the inscription, "Ave Maria Gratia," between the heads of two dragons. Workmanship, French, of the XIIth century. This ring was found in 1829, in the tomb of Thierry, Bishop of Verdun. †1165.

Fig. 80. *Monogram of the Virgin.* Jewelled ornament of the precious mitre of William of Wykeham. XIVth century. New College, Oxford.

An M. crowned, set in gems, and partially enamelled, with the subject of the Annunciation introduced in the open parts of the letter. This ornament appears to have occupied a central position on the mitre. Size, 2 in. by 2¼. The groundwork of this mitre was of silken tissue, closely set with gold and pearls.

Fig. 81. *Crozier of William of Wykeham, Bishop of Winchester.* XIVth century. New College, Oxford. Silver gilt and enamelled, of exquisite workmanship.

Fig. 82. *Statuette of the Virgin.* XIVth century. Louvre. Described, p. 231.

Fig. 83. *Magical ring for the thumb.* Gilt. German. XIVth century. (Coll. Londesborough.) Figure of a toad swallowing a serpent.

Fig. 84. *Clasp, or morse, for a cope.** Silver-gilt. XIVth century. Coll. Soltykoff. (No. 981 Debruge-Labarte Collection.)

Forms a quatrefoil, with small lobes at the points of intersection. A lozenge edged with cabochons of various colours and pearls, is inscribed within the quatrefoil, and on it, is an eagle crowned; the wings and body enriched with precious stones, rubies, sapphires, and garnet cabochons. Diameter, 7 inches.

Fig. 85. *Toad-stone ring.* Silver. With figure of a toad on the face of the shell or stone. XVth century. (Coll. Londesborough.)

Whatever the toad-stone may have been, it was said to indicate the presence of poison by perspiring and changing colour, and that, because it was found in the heads of toads, and according to Albert Magnus, it preserved impressed upon its surface the figure of the animal. All know Shakspeare's beautiful allusion to this superstition. Fenton, who wrote in 1569, says, "There is found in heads of old and great toads a stone which they call borax, or stelon." They "being used in rings, gave forewarning against venom."

> "Were you enamour'd on his copper rings,
> His saffron jewel, with the toad-stone in't?"
>
> *Ben Johnson's Fox*, ii. 5.

> "The foule toad hath a faire stone in his head."
>
> *Lely's Euphues*, D. 46.

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* Clasp, morse, fibula, *fr.* fermail, agrafe, mors de chape, &c. There are few objects that have remained so completely within the province of art, or of which a greater variety exist that these ornamental clasps to unite the two parts of a vestment either on the shoulder, neck, or breast—sometimes only used as a simple decoration. The utmost skill and taste were lavished upon them, and the miniatures, and sculptures, and inventories, show the extraordinary expense of those of the middle ages. In the inventory of St. Paul's, made 1295, there are no less than twenty-eight.

In addition to the French inventories quoted p. 234, we find a "crapaudine" ornamenting the bottom of the crystal cup of Louis of Anjou, doubtless to detect any poison in the liquid.

"1416. Sept anneaulx, à pierres crapaudines, xvij langues de serpens et une pierre de corail qui sont de deux espreuves, tout prisé."—*Inventory of the Duke de Berry.*

Fig. 86. *Reliquary of Orvieto.* Italian, XIVth century. Described, p. 238.

The "Mass of Bolsena," as it is termed, is the subject of one of Raffaelle's frescoes in the Vatican.

Fig. 87. *Cruet, rock-crystal.* French. XIVth century. Coll. Soltykoff. Mounted in silver, chased and gilt. (No. 905 Debruge-Labarte Collection.)

Fig. 88. *Chalice in silver.* Chased and gilt. By Arditi. XIVth century. Coll. Soltykoff. (No. 906 Debruge-Labarte Collection.)

The foot is enriched with subjects in translucid enamel, and with chased foliage in high relief, interspersed with enamelled birds. The knop is ornamented with busts of saints, in six medallions; the base of the cup with Gothic compartments filled with chimerical animals. On a fillet above the foot is inscribed "Andreas Arditi de Florentia me fecit."

Fig. 89. *Cruet of rock-crystal.* Mounted in silver, French. XIVth century. Chased and gilt, turreted top, surmounted by a helmet, with a monk at his devotions, for crest. (No. 905 Debruge-Labarte Collection.)

Fig. 90. *Fibula of chased silver, inlaid with niello work.* Italian work. XVth century. Marlborough House.

Fig. 91. *Pendant jewel of the Renaissance, representing France and Victory.* O enamelled gold, enriched with pearls and precious stones. (Coll. Londesborough.)

Unicorn, the body formed of two pearls irregularly shaped (*baroques*), the head and legs of enamelled gold. France, represented by a female figure, bearing a sword of diamonds, and attired in a *fleur-de-lisée* robe, is seated on the back of the animal, and encircles with her arms another female figure, bearing a palm representing Victory. This jewel is enriched with diamonds, rubies, emeralds, and two pearls "en pendeloque."* (No. 1002 Debruge-Labarte Collection.)

Fig. 92. *Pendant for the girdle.* Of gold, chased, pierced, and enamelled. Jewel of the Renaissance. Of the best style. It is also enriched with four pendant pearls "en pendeloque."

Fig. 93. *Golden ring.* Italian. XVIth century. Workmanship very fine, probably Italian. (Coll. Londesborough.)

It is set with a pyramidal diamond, held in its place by four birds' claws, in open chased work; the shank is semi-engraved within and without. This class of ring was highly prized in England during the revolutions of the XVIIth century, from its power of marking or writing upon glass, and thereby leaving records, some of which have descended to our times.

Fig. 94. *Cruet, rock-crystal.* Italian. XVIth century. Of ovoid form, cut in gadroons. Coll. Soltykoff. (No. 913 Debruge-Labarte Collection.)

Fig. 95. *Ring, silver-gilt.* Renaissance. (Coll. Londesborough.)

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* *Pendeloque.* An ornament consisting of a stone, generally pear-shaped, set in gold or silver, and so suspended from the ear-ring or cross from which it hangs, as to move at the slightest touch. The name pendeloque is given to the stone itself when it has the form of a pear. Millin, *Dict. des beaux-arts.*

Fig. 96. *Pendant jewel of the Renaissance.* In gold, chased, enamelled, and enriched with precious stones.

A mermaid, winged, with double tail. In one hand she holds a mirror formed of a table diamond, in the other a serpent; in the centre a cabochon ruby; a black pearl en pendeloque. (No. 996 Debruge-Labarte Collection.)

Fig. 97. *Presentoir, or stand for holding a cup.* Silver-gilt, richly decorated with masks and arabesques. XVIth century. (Coll. Soltykoff.)

The cup which rested on this presentoir was fastened by the three winged horses, which by means of a spring placed under the foot, separate so as to allow the cup to be taken. (No. 917 Debruge-Labarte Collection.)

Fig. 98. *Gimmal rings.** German. (Coll. Londesborough.)

1.—Gold. Two hands clasped upon a plain wire ring.

2.—Gilt. Consists of three rings, which separate and turn upon a pivot. The two outer ones had been united by two hands clasped, which concealed two united hearts upon the centre ring, which is toothed at the edge. German.

Fig. 99. *Magical ring.* XVIIIth century. (Coll. Londesborough.)

Opens on pressing the jewels in the centre; within are inscribed cabalistic inscriptions.

Fig. 100. *One of the jars of the Alhambra.*

"La Jarra," as it is styled, is white, the ornaments blue, of two shades, or of that golden copper lustre of the Hispano-Arabic pottery. This, with another, was

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* The gimmel or gimmal ring, as its name implies (*gemelle*), is constructed of double hoops which play one into the other, each hoop is surmounted by a hand, and in the palm of the lower hand is represented a heart; when the hoops close, they unite into one ring, the hands slide into contact enclosing the heart, thus symbolising love, fidelity, and union. From a simple love token, the gimmal was converted into a ring of affiance. Each putting the finger into one of the hoops were thus symbolically yoked together, a yoke which was shared, one half being allotted to the other, thus typifying community of interests, &c. The French term is *foi, alliance*, which last word in the Dictionnaire de Trevoux is defined to be a ring, "que l'accordé donne à son accordeé, où il y a un fil d' or et in fil d'argent." thus supposing one hoop to be of gold, the other of silver. Archdeacon Nares says that gimmel rings, though originally double, were by a further refinement made triple.

Herrick, in his Hesperides, has the following lines :—

THE JIMMAL RING A TRUE LOVE KNOT.

"Thou send'st me a true-love knot; but I
Return'd a ring of jimmals to imply,
Thy love had one knot, mine a triple tye."

In Dryden's "Don Sebastian" we find :—

"A curious artist wrought 'em,
With joynts so close as not to be perceiv'd;
Yet they are both each other's counterpart.
(Her part had Juan inscribed and his had Zayda.
You know those names were theirs :) and in the midst,
A heart divided in two halves was plac'd.
Now if the rivets of these two rings, inclosed,
Fit not each other, I have forged this lye,
But if they join, you must for ever part." *

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* See also Hone's "Every Day Book;" History and Poetry of Finger-rings, by C. Edwards; and Catalogue of the Londesborough rings.

discovered beneath the pavement of the Alhambra. Its companion was broken in the time of Montalla.

Fig. 101. *Altar-piece.* By Luca della Robbia. XVth century. Church of San Miniato, Florence.

Fig. 102. *Majolica jug.* Circ. 1520. (No. 1846 Coll. Bernal.)

Height, nearly 19 inches. An escutcheon bearing the "palle" of the Medici, all six charged with fleurs-de-lis, surmounted by the papal keys and tiara.

Fig. 103. *Majolica dish.* An artist painting a dish, a lady seated beside him. (No. 1848 Coll. Bernal.)

This dish was formerly at Stowe, the subject said to be Raffaelle himself, with the Fornarina, seated in his studio. 9½ inches diameter.

Fig. 104. *Majolica drug bottle,* "Vaso da Spezeria." In colours.

Fig. 105. *Majolica fruit-dish.* Ornamented with "Amorini" trophies, and arabesques. (Coll. Bernal.)

A broad flat border, with a welled centre, characterise this class of plates, "fruttiere," which were used as receptacles for sweetmeats, and in England were represented by the painted roundles or fruit trenchers of wood. This plate belongs to the best period of Italian arabesques.

Fig. 106. *Majolica vase.* The Triumph of Galatea, after the fresco of Raffaelle in the Farnesina palace, Rome. (Coll. Marryat.)

Polyphemus is represented on the other side of the vase.

Fig. 107. *Majolica dish.* Arabesques, in grisaille, on a blue ground. Probably after the designs of B. Franco. Marlborough House.

22 inches diameter, of the finest period of manufacture (Circ. 1550). The arrangement of the drapery in the upper part, and the disposition of the terminal figures underneath, clearly show that the piece was intended to serve as an ornament of a dressoir; at the same time the various details over the surface is so well managed, that there is no want of balance when placed in a horizontal position.*

Fig. 108. *Majolica ewer.* Triton and Nereid, surmounted by marine divinities. Circ. 1550. Coll. Soltykoff. Painted in colours, the manufacture of Urbino. (No. 1148 Debruge-Labarte Collection.)

Fig. 109. *Majolica inkstand.* Of triangular form. XVIth century. In the possession of Colonel Palliser.†

The arms of the Medici, surmounted in one escutcheon by the cardinal's hat, in the other by a coronet, would lead to the supposition that this inkstand was made for Ferdinand, Cardinal and Grand Duke of Tuscany, 1606.

Fig. 110. *Candlestick.* Fayence of Henry II. Ornamented with masks, garlands, and three genii supporting escutcheons with the arms of France, and of Henry II. and Diane de Poitiers. (Coll. Sir A. de Rothschild.)

Fig. 111. *Rustic basin, with reptiles, shells, &c.* Enamelled ware of B. Palissy. XVIth century. (Coll. Soltykoff.)

Upon a sandy island, covered with shells, is an eel; four fishes are represented swimming in a stream of water which surrounds it. The edge of the dish is covered with plants and shells, interspersed with frogs, lizards, and other reptiles, all in their natural colours.

Fig. 112. *Palissy dish.* Arabesques in relief. Marlborough House.

Fig. 113. *Vase.* Enamelled pottery of Germany. (Coll. Sauvageot.)

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* *Art-Union Journal,* 1855.

† By an error of the engraver, the Medici arms are incorrectly drawn.

Fig. 114. *Drinking-cup.* Enamelled pottery of Germany. (Coll. Palliser.)

This cup resembles the metal drinking-cups made at Nuremberg in the XVIth and XVIIth centuries, in the forms of bears, rams, birds, &c., the heads unscrewing, and the bodies containing the liquids.*

Fig. 115. *Palissy vase.* Enriched with masks and fruit in relief. Museum of the Louvre.

Fig. 116. *Palissy stove tile.* Musée de Cluny.

Fig. 117. *Pilgrim's bottle.* Blue and white stoneware. Date 1590. (No. 3360 Coll. Bernal.)

Escutcheon of the Prince of Orange. Medallion with head, surrounded by Renaissance arabesques.

Fig. 118. *Jacobus Kannetje.* XVth century. (Coll. Marryat.)

Fig. 119. *Apostles' mug.* German stoneware. (Coll. Marryat.)

Fig. 120. *Jug.* Grès Flamand. XVIth century. (Coll. Huyvetter.)

Fig. 121. *Cameo.* White, on blue ground, after Flaxman. Wedgwood stone-ware. XVIIIth century. Marlborough House.

A group of children. A subject frequently reproduced on vases and other ornamental objects, in size proportioned to the piece. An exquisite composition and worthy of decorating this refined and beautiful manufacture, which is equal in delicacy of finish to the finest onyx cameos.

Fig. 122. *Dresden teapot.* Chinese style. (Coll. Marryat.)

Fig. 123. *Dresden candelabrum.* (No. 196 Coll. Bernal.)

A female figure, seated on a pedestal, round which are Cupids supporting shields.

Fig. 124. *Sèvres vase.* Bleu de roi. (No. 600 Coll. Bernal.)

The handles rest on grotesque masks, the vase is encircled by scrolls in gold, and the subjects of the medallions are, one, a Nymph at a bath, the other a Bacchanal reclining and squeezing the juice of grapes into his mouth. 15½ inches high.

Fig. 125. *Sèvres vase.* Bleu de roi. (No. 601 Coll. Bernal.)

Oviform, with flattened handles, the medallions painted in Bacchanalian subjects. 13 inches high.

Fig. 126. *Portland vase.* British Museum.

Fig. 127. *Alexandrian vase.* Museo Borbonico, Naples.

Fig. 128. *Pompeii vase.* Museo Borbonico, Naples. Size of original.

This vase was discovered in a sepulchre of Pompeii, 1839. It is of the same character in the colours and quality of the glass as the Portland vase, the white enamel figures upon the dark blue transparent ground being raised or embossed out of the white exterior coating, by first rate engravers, probably Greek artists working in Rome, possibly as late as the reign of Trajan. This beautiful vase is, no doubt, of more recent date than the Portland, and is of less severe and conventional character; the Bacchanalian figures descriptive of the gathering in of the harvest, beautifully harmonise with the arabesque scrolls. In design and execution it is only surpassed by the Portland vase. The vase is perfect, with the exception of the foot, which has been abstracted. Zahn supposes it to have been of gold.†

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* Of these many examples are given in Miscellanea Graphica, from Lord Londesborough's Collection.

† A. Pellatt. *Curiosities of Glassmaking.* The woodcut which forms this group, 125, 126, 127, and 128, is, with the kind permission of Mr. Pellatt, copied and engraved by the pupils of Marlborough House, the original block having been destroyed by fire.

Fig. 129. *Auldjo vase.* (Coll. Auldjo.)

Found in 1833, at Pompeii, in the House of the Faun. The ground of the vase is of a deep sapphire blue, on which, in opaque white glass, the ornaments are cut. It was found broken; part is in the possession of Mr. Auldjo, the other in the British Museum. The shape of this vase is elegant, the handle and lip of exquisite form, the taste and execution of the ornamental work of the purest style. This, with the Portland and Pompeii vases, exhibit the perfection of the art of glass-making at the period when they were made.

Fig. 130. *Goblet of Venetian enamelled glass.* XVIth century. Marlborough House.

The glass is of a brilliant emerald green colour, and the scroll-like ornaments enclosing medallions containing profile portraits, are executed in gold and colours. The date of this piece is about 1500.

Fig. 131. *Schmeltz glass.* Opal. (No. 2788 Coll. Bernal.)

Fig. 132. *Fluted glass on openwork stem with two dolphins.* 13 inches high. "Vetro di Trina." * (No. 3315 Coll. Bernal.)

Fig. 133. *Lace-work vessel in the form of a fish.* 7 inches high. (No. 3319 Coll. Bernal.)

Fig. 134. *Pilgrim's bottle, enamelled glass.* XVIth century. Coll. Soltykoff. (No. 1278 Debruge-Labarte Collection.

Four little handles attached to the body of the bottle admits of its being suspended by a cord. White glass, decorated with enamelled interlacings of various colours.

Fig. 135. *Enamelled glass.* XVIth century.

Hanap, of blue glass-coloured zaffre. The body decorated with imbrications of gold, edged with white, and covered with beads of blue enamel. The foot is semé of gold. (No. 1271 Debruge-Labarte Collection.)

Fig. 136. *Ewer.*

Composed of seventy twisted canes, twenty-two of pattern J., each separated by two simple threads. (No. 1290 Debruge-Labarte Collection.)

Fig. 137. *Bottle.* Enamelled glass.

The form termed by the French, "Buire," with one handle. White glass decorated with paintings in coloured enamels. Upon the body, a bold scroll encloses a medallion, upon which is represented a knight riding a chimerical animal; he bears on his shoulder a kind of long trumpet, to which is attached a banner with the S. P. Q. R. of the Roman republic. The neck of the bottle is enriched with imbrications. (No. 1280 Debruge-Labarte Collection.)

Fig. 138. *Method of making the filagree canes of glass.*

Fig. 139. *Filagree canes of various patterns.*

Fig. 140. }
Fig. 141. } *Patterns of Venetian glass.*

Fig. 142. *Method of making the millefiore glass.*

Fig. 143. *Method of making the mosaic work.*

Fig. 144. *German drinking glass.* Syphon tube in the centre. (No. 3246 Coll. Bernal.)

Fig. 145. *Venetian glass.* Openwork twisted stem with blue ornaments. 14 inches high. (No. 2734 Coll. Bernal.)

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* Trina, (*Italian*) lace.

Fig. 146. *Venetian enamelled bottle.* (No. 2934 Coll. Bernal.)

A flattened bottle with raised leaf ornaments, enamelled between white stripes mounted with silver. 10½ inches high.

Fig. 147. *Back of saddle.* Wood-carving. XIIIth century. In alto-relief. (No. 1 Debruge-Labarte Collection.)

The figure on the left represents a hairy savage fighting a lion, that on the right a knight contending against a lioness. The knight is attired in a hauberk and chausses of mail to the feet, with genouillières. Over a capeline of mail he wears a rounded helmet, and over the hauberk his *cotte-d'armes.* His military belt, which is buckled on his left side, supports the scabbard of the braquemart with which he is armed. In his costume we have an exact representation of a knight of the time of St. Louis. The hairy man * contending against a lion,† and the armed man against a lioness, were probably intended to signify that man should resist the Demon with the power given him by the Almighty, in the same manner that he should fight with temporal arms against the enemies of Christianity on earth: a fitting subject for the war harness of a companion of St. Louis.

Fig. 148. *Surcoat, helmet, shield and gauntlet of the Black Prince.* Suspended over his tomb in Canterbury Cathedral.

The jupon or surcoat, of pile velvet, now of a palish, yellow brown, faded probably from crimson, is ornamented with the arms of the Black Prince, quarterly France and England, embroidered in gold; underneath the velvet covering, is a fine buckram or calico, gamboised or padded with cotton quilted in longitudinal folds.

Fig. 149. *Tilting bourguinot.* Fluted top. XVIth century. (No. 2698 Coll. Bernal.)

The outer visor of this singular piece has a grotesque nose and moustache. The inner visor of openwork, the comb, twisted. Date, 1480—90.

Fig. 150. *Chamfron of the horse-armour of Christian II.* Historical Museum, Dresden.

Fig. 151. *Shield ornamented with bas-reliefs.* Forming a trophy with sword-handles of various forms. XVIth century.

Round iron shield covered with figures, executed in hammer-work, and chased. Italian style of XVIth century. Coll. Soltykoff. (No. 1393 Debruge-Labarte Collection.)

Fig. 152. *Helmet of Francis I.* XVIth century. Imp. Lib., Paris. Damascened in gold.

Fig. 153. *Hercules and Antæus.* Medallion on the horse-armour of Christian II. Historical Museum, Dresden.

Fig. 154. *Sword-handle.* By Leigeber. XVIIth century. Historical Museum, Dresden.

Fig. 155. *Powder-flask.* Carved wood. XVIth century. Coll. Bale.

Subject, two dogs seizing a stag. The mouth of the piece is in copper, chased and gilt, representing a dog in full relief. (No. 1415 Debruge-Labarte Collection.)

Fig. 156. *Chased powder-flask.* Subject, Samson and Dalilah. On velvet. Above the figures are the arms of the Medici. (No. 2519 Coll. Bernal.)

Fig. 157. *Door leading from St. George's Chapel to the Tomb-house.* XVth century.

Fig. 158. *Wrought iron escutcheon.* St. George's Chapel, Windsor.

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* The hairy man was also a symbol of strength, and thus appears in the XIIIth century, and continues to the beginning of the XVIth. Enchanters were generally so represented.

† The lion, according to the belief of the middle ages, was one of the forms in which the Devil was sometimes supposed to make himself visible; therefore this conflict of man with a lion, was a favourite subject with the artists of the middle ages.

Fig. 159. *Worked iron grating.* St. George's Chapel, Windsor.

Fig. 160. *Tabernacle door.* Abbey of St. Loup, Troyes. XVth century.

Of iron, forged, chased and gilded, enriched with perforated decorations, in the florid Gothic style. In the centre, the Saviour placed under a Gothic canopy holds the cup and the wafer. On the other door the Crucifixion is represented.

Fig. 161. *Bronze knocker.* Cast and chased. XVIth century. Marlborough House.

The rich and fanciful design is only equalled by the vigorous execution of the work, which though cast is finished by an elaborate process of chasing.

Fig. 162. *Silver-gilt clock with complicated movement.* Enriched with sculptures and damascened. XVIth century. Coll. Soltykoff. (No. 1446 Debruge-Labarte Collection.)

Fig. 163. *Metal-gilt clock.* Chased and engraved. With figures and arabesques. (No. 3980, Coll. Bernal.)

Fig. 164. *Watch of an Abbess in the form of a pectoral cross.* Of rock-crystal mounted in copper gilt. French. XVIth century. (Coll. Soltykoff.)

Dial with one needle only. (No. 1466 Debruge-Labarte Collection.)

Fig. 165. *Octagonal watch-case.* Composed of plates of nielloed silver, mounted in silver-gilt, with portrait on one side of Laura, on the other of Petrarch. (No. 1025 Debruge-Labarte Collection.)

Fig. 166. *Iron money-box.* St. George's Chapel. XVth century.

Fig. 167. *Tau, on pastoral staff.* XIIth century. Coll. Soltykoff. In boxwood and ivory enriched with precious stones. (No. 1479 Debruge-Labarte Collection.)

This curious piece is in the form of a sculptured column, on the summit of which is a lion. The lion and the capital of the column are both of wood; round the base of the capital is inscribed LEX DEI VERA EST. The shaft below is composed of a piece of ivory about four inches high, upon which four figures are carved in bas-relief, a bishop seated on his throne, assisted by two other bishops, consecrates a fourth prelate, bishop or abbot, kneeling before him. The ivory shaft is fixed in a piece of wood below, with a prominent sculptured knop, and this inscription in uncial characters, PER CRUCIS HOC SIGNUM FUGIAT OMNE MALIGNUM. Below the knop is a long piece of furrowed wood, the ivory end of which is pointed with iron. M. A. Lenoir, who possessed this curious specimen in his collection, has described and figured it.*

Fig. 168. *Saddle of the Cid.* XIth century. Royal Armoury, Madrid.

Fig. 169. *Irish harp.* Museum of the Irish Academy, Dublin.

Fig. 170. *Cradle of Henry V.* Preserved in the Castle, Monmouth.

Fig. 171. *Lid of a casket.* Ornamented with bas-reliefs in stag's-horn, perforated and laid on a red morocco ground. XIVth century.

Fig. 172. *Chased steel casket.* Italian work of the XVIIth century. (Collection of Lord Cadogan.)

Each side is decorated with three consoles reversed, terminated by rams' heads. The lid is surmounted by a pedestal on which is a ball with the Medici arms. At the corners of the pedestal are placed Caryatides with eagles' heads. On the two panels in front are figures of Mars and Minerva chased in relief. (No. 1433 Debruge-Labarte Collection.)

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* *Musée des Monuments français*, t. ii. p. 28.

Fig. 173. *Tortoise-shell cabinet.* Flemish. XVIIth century. Decorated with ivory carvings.

The two-tiered hemicycle is divided into three, a niched arch in the centre and a panel on each side. On the lower tier a statue of Hope occupies the centre, Prudence and Plenty on each side, the twisted columns intervening being entwined with foliage in ivory. The six bas-reliefs of the wings are illustrative of the history of Joseph, and are flanked, in the lower tier by Caryatides and twisted columns, in the upper by consoles reversed. The piece is crowned with a balustrade divided by sixteen pedestals surmounted by urns with flowers and figures. In the centre, two Cupids support a shield for armorial bearings. This cabinet, according to tradition, belonged to the Duke of Lerma, for whom it was caused to be made by the people of the Low Countries as a testimonial to the minister of Philip III. (No. 1507 Debruge-Labarte Collection.)

Fig. 174. *Ewer of brass.* Circ. 1300. Found in the North Tyne river, near Hexham. British Museum.

Fig. 175. *Ewer of brass.* XIIIth century. From the collection of M. Duguet of Paris. British Museum.

Fig. 176. *Bronze statuette of Laot-sen, a Chinese philosopher.* China.

Founder of a sect which numbers more than 5,000,000 followers. He was born about A.D. 604, and came into the world with white hair, hence his name, which signifies "child-old-man." He died at the age of 81, and according to his disciples, went up to heaven on a black buffalo.

Fig. 177. *Bronze incense-burner.* Chinese.

Fig. 178. *Carved ivory box.* Chinese. Mounted in silver.

Fig. 179. *Rama and Sita.* Hindoo divinities seated on the throne. A musician with the head of an ass sings kneeling before them, a woman accompanies him on the *bin.* Hindoo drawing in body colour.

Rama is the seventh incarnation of Vishnu when he reappeared to punish Ravana, a holy brahmin, who had obtained ten heads and twenty arms from the god Iswora. Ravana having abused his power, Vishnu sent the ape Hanuman to burn his palace, and then appeared himself, fought the brahmin, and killed him. Sita is Rama's wife, Laschmar his brother.

Fig. 180. *Body colour painting on the leaf of a tree.* China.

Fig. 181. *Bas-relief.* Executed in rice paste, bronze, and rock-crystal; the flowers and fruit in coral, amber, chrysoprase, &c. China.

A vase with flowers, a cup filled with fruit and flowers, and a *ting,* all executed in relief, glazed, and placed in a carved frame with ivory ornaments. The vase with flowers is of rice paste (a vitrification resembling jade), and enriched with precious stones and pearls. The flowers are of coral and amber, the stalks of bronze, chased and gilded. The cup is of rock-crystal, the flowers and fruit it contains are composed of rose-quartz, amber, agates, chrysoprase, and other hard substances. The ting is of bronze, chased, gilded, and ornamented with precious stones. The vapour of the incense is imitated by jade. The stand, of iron-wood, is decorated with pierced ivory. (No. 1702 Debruge-Labarte Collection.)

Fig. 182. *Bas-relief.* In agalmatolite, carved and perforated, and appliqué upon bamboo. China.

A young man presenting a cup of tea to a lady.

Fig. 183. *From a Turkish MS. on vellum.*

Fig. 184. *From the same Turkish MS.*

This MS. is ornamented with decorations in gold and colours, in the best oriental style, of which fig. 183 is a specimen. The words inscribed in the crescent are,

"Written by the most feeble of writers, Soliman, known under the name of Hikmetz. 1199." (Year of the Hejira, answering to November, 1784, to Nov., 1785.)

Fig. 185. *Enamelled dish.* Hindoo work.

On a green enamelled ground, bordered by white bands, a peacock at the foot of a shrub covered with flowers. Executed in colours. (No. 1723 Debruge-Labarte Collection.)

Fig. 186. *Ancient enamelled vase.* China. Pyriform vase, with a long neck and circular foot.

The body divided by bands of blue enamel into three compartments, filled by scrolls of large expanded flowers of red, white, blue, and yellow. The foot is decorated with a wreath of flowers, and the mouth with festooned leaves. These rich designs are expressed by a thin line of gilded metal on a blue ground. (No. 1716 Debruge-Labarte Collection.)

Fig. 187. *Jade cup with kylins.* China.

Three kylins carved out of the block serve for handles; the body is decorated with engraved arabesques. (No. 1727 Debruge-Labarte Collection.)

Fig. 188. *A Buddhist Divinity.* Of white agalmatolite. China.

Fig. 189. *Pink vase.* Of agalmatolite.

A branch of tulip-tree, with a flower, rises out of a rock of gray agalmatolite, decorated with flowers in relief. The interior of the tulip is hollow, to contain water, or receive pastilles.

Fig. 190. *Chased silver cup.* China.

The body is covered with vine-leaves and grapes, chased in relief; two vine-stalks form the handle. At the bottom is inscribed in Chinese; "Will it be in this present life as in the next (that we shall meet again)?" Probably this cup was used by two friends at the moment of parting.

Fig. 191. *Thumb-ring of jade.* Decorated with gold filagree and incrusted with rubies. Hindoo work. Cut out of a single piece of jade.

Fig. 192. *Blue and white dish.* (Coll. Marryat.)

Fig. 193. *Porcelain double bottle.* China.

With two mouths, form flattened. A quantity of figures, trees and shops are modelled in relief on the sides of the bottle. (No. 1855 Debruge-Labarte Collection.)

Fig. 194. *Porcelain cup.* China.

Oval, with a handle having on each side a kylin. Under the spout are also two of the same animals. Coloured with flowers and foliage. (No. 1862, Debruge-Labarte Collection.)

Fig. 195. *Bottle, gourd-shaped.* Japan. (Coll. Marryat.)

Fig. 196. *Hindoo sabre.*

Damascened in gold and silver, the hilt and guard of massive silver are terminated by the head of a chimerical animal, and covered with rich ornaments chased in relief.

Fig. 197. *Ivory-handled Malay knife or krise.* Terminated by the head of a bird. Blade waved.

Fig. 198. *Ivory-handled Japanese cleran.* Sculptured in open work.

Fig. 199. *Tartar poignard.* Mounted in chased silver.

Fig. 200. *Cylindrical vessel.* Red lacquer, with subjects in relief. China.

Martin, a carriage-painter, in the beginning of the reign of Louis XIV. not only imitated the lacquer of China and Japan, but discovered a varnish or lacquer which he applied upon wood and copper. With his pretty paintings he decorated snuff-

boxes, fans, and other objects for the use of ladies. His varnish goes by his name, "Vernis de Martin."

Fig. 201. *Japan cabinet.* Black lacquer painted in gold. The hinges, handle and lock are of chased silver.

Fig. 202. *Bronze vessel* (Ting). China. All the Oriental specimens, Nos. 176 to 202, with the exception of Figs. 192 and 195, are from the Debruge-Labarte Collection.

Fig. 203. *Ewer.* Mesopotamian work, brass inlaid with silver. XIIth century. British Museum. (From the De la Rotta Collection.)

Fig. 204. *Votive diptych.** On one tablet Æsculapius and Telesphorus; on the other, Hygieia. IInd century. (Coll. Fejérváry.)

Hygieia is richly attired, leaning on the tripod and feeding a snake; she is accompanied by Cupid without wings, above her we see Jacchus. This is a celebrated monument of ancient art, of the time of Marcus Aurelius or Commodus, and is published by Gori, Raphael Morghen, and others. Formerly in the collection of the Gaddi family of Florence, and then of Count Wiczay in Hungary.†

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* This diptych should have been inserted p. 11.
† Catalogue of the Fejérváry Collection.

HANDBOOK OF THE

ARTS OF THE MIDDLE AGES, &c.

EUROPEAN ART.

CHAPTER I.

SCULPTURE.

§ I. GENERAL OBSERVATIONS.

IN treating of the fine arts as applied to domestic use, the first place must undoubtedly be conceded to sculpture. In all ages the custom has prevailed of adorning with chiseled or carved figures and devices both household and sacred vessels, domestic furniture and weapons, of whatever material composed, these ornaments corresponding naturally with the taste of the period which gave birth to them.

Sculpture of the first centuries of the middle ages.

The establishment successively of the Goths and of the Lombards in Italy, the invasion of Gaul by the Franks, and the various calamities which, during the earlier portion of the middle ages, befel the western empire, had not the effect, as might have been supposed, of annihilating the industrial arts, which received, on the contrary, much encouragement from the barbarians; and yet, when we duly consider all the different causes that have, in the lapse of centuries, combined to destroy the productions of so remote a period, we can hardly feel surprise at the smallness of the number handed down to us. Some pieces forming part of the treasure of Monza, to which is ascribed the date of Queen Theodolinda,

the ivory cathedra, or episcopal chair of St. Maximian, Archbishop of Ravenna in the VIth century, (Fig. 1), and the throne of Dagobert preserved in the church of St. Denis, but not of unquestionable authenticity, these are almost the only relics of art as applied to furniture * attributable to the first three centuries of the middle ages. We must therefore have recourse to conjecture regarding the style of ornament employed.

At the epoch when Christianity, triumphant under Constantine, was at length enabled to display external symbols of its existence, it is well known that Christian art, unable so immediately to create for itself a new technica, adopted the style of antiquity in its then degenerate state. The earlier mediæval centuries do not seem to have been inspired by any fresh ideas. In Italy, the King of the Goths, Theodoric, a passionate admirer of the arts and monuments of ancient Rome, not only restored the edifices erected by the Romans, but caused new ones to be built on the principles

* Fr. *Art mobilier.* The French language abounds in technical terms for which we possess, as yet, no fixed or recognised equivalent in our own, and which will therefore, in this work, be left untranslated. Our English word *moveable,* for instance, although, in its etymology a strict rendering of the French *mobile,* is so little employed as a term of art that in many places, the translation sounds harsh, and scarcely conveys the idea of the original with anything like nicety of expression. *Meubles* and *mobilier* have a much wider signification than our words *furniture* or *moveables.* In the "Termes de jurisprudence," we find that "les pierreries, l'argent sont regardés comme meubles." *Mobilier* is what the French call a "terme du Palais," or law-term, answering to our *goods and chattels,* including everything but that which forms a constructive or architectural part of a house or apartment, not only household furniture and decorations but personal ornaments, apparel, jewels and money. "Succession mobiliaire" means a succession to a personal estate. The French have their *mobile, mobiliaire, mobilier.* The Germans their *mobilien.* Why should we not have *mobile?* The word exists, but is obsolete, and though it has been never used in a sense strictly synonymous with "*moveables and chattels,*" sooner than create a new word, why should we not revive an old one, or rather apply it in the same sense as the French *mobile.* We find in our dictionaries:—

Res mobiles. "Chattels, moveable property, moveables."—*Bailey's Lexicon.*
Res mobiles (*Digesta*), "moveables, chattels."—*Riddle's Latin Lexicon.*
Mobile. "An adopted Latin word from mobilis, moveable, now entirely disused."—*Nares.*
,, "Moveable (not used)."—*Webster.*
,, "That can be moved; moveable."—*Richardson.*
,, "Moveable (obsolete)"—*Craig.*
Moble. "Moveable." Chaucer.—*Bailey's Etymological Dictionary.*
Mobil, Moble. *Subst.* "Moveable goods, or such as are not affixed to the soil."

"Yone berne in the battale will ye noght forbere,
For all the *mobil* on the mold merkit to meid."—*Gawan Gol.* iii. 13.

It is more generally used in the plural:

"Fra euery part thai flokking fast about,
Bayth with gudo will, and thare *moblis* but dout."—*Douglas, Virgil,* 65, 25.
Jamieson's Et. Dict.

The adjective mobile, mobiliary, might therefore be usefully introduced; and as *sedere* gives *sedilia,* so *movere* may give *mobilia.*

of ancient art. The Lombards, who succeeded the Goths,

Fig. 1. Ivory Chair of St. Maximian, at Ravenna. VIth century.

endeavoured, under Agilulph and Theodolinda, to follow the

example of the nations they had conquered, and are not therefore likely to have introduced any changes in the practice of arts with which they were unacquainted. They would probably be satisfied to take as their models the many monuments of Roman greatness still existing, and those which more recently had been erected by Theodoric; and although, to judge by the fragments still remaining at Pavia and Monza, these productions fell far short of those which had served them for guides, they possess, notwithstanding, no sort of originality. As to Gaul, which had been civilised by the Romans, and conquered by a warlike people unused to the cultivation of the arts, all leads to the belief that under the Merovingian Dynasty, works of art in this country retained the character of the noble monuments raised there by the Romans. It follows, that the objects for domestic use of this first portion of the middle ages would be stamped in like manner with the style of antiquity.

Carlovingian epoch.

Towards the close of the eighth century, the restoration of the fine arts was zealously promoted by Charlemagne, whose noble efforts in the cause were emulated by those of Adrian I. and Leo III. in Italy; but still the artists of this period adhered to the models of the antique. The admirable manuscripts, adorned with miniatures, bequeathed to us by this age, the fragments of mosaic extant at Rome, some remains of architecture such as the wall of the Abbey of Lorsch (Fig. 2), on the road from Manheim to Darmstadt, and the capitals from the castle of Ingelheim, to be seen in the museum of Mayence,*

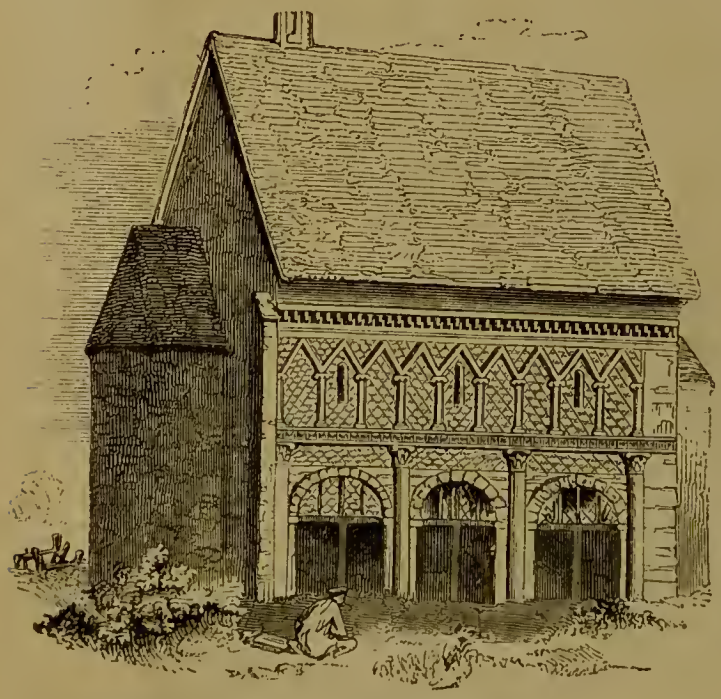


Fig. 2. Abbey of Lorsch.

* De Caumont, *Cours d'antiquités monumentales*, t. iv. p. 101.

are all so many proofs of their striving to retain, with tolerable fidelity, the style of ancient Rome. It cannot, however, be denied, that a certain Byzantine influence (Figs. 3 and 4) began from that period to be felt; a circumstance easily explained by the intercourse of Charlemagne with the empire of the East.

Fig. 3. Martha and Mary advancing to the Saviour. Sculpture of Xth or XIth century from Selsey, now in Chichester Cathedral.

The oriental style, admitting as it does of that profuseness of ornament which men in almost all ages have preferred to grandeur and simplicity, could not fail to exercise an extensive influence over all the branches of art employed in the production of arms, jewels, furniture—in short, of every article of luxury. A convincing proof of this is afforded by the crown of Charlemagne, preserved in the imperial treasury

of Vienna, the form of which is sacrificed to the richness of the material, and the fuller display of the huge precious stones with which it is overloaded.

These remarks on the epoch of Charlemagne apply with equal force to the reigns of his sons and grandsons. The impetus given by this great man did not cease on his death, but, until the end of the reign of Charles the Bald, the arts continued to receive encouragement.

Fig. 4. The Raising of Lazarus. Sculpture IXth or Xth century, Chichester Cathedral.

Though the earlier centuries of the middle ages have bequeathed to us such scanty relics of monumental sculpture, they afford us numerous specimens of the art in its application to mobilia, to which our attention must at present be confined. These consist chiefly of the tablets of ivory obtained from diptychs, or the covers of rich manuscripts.

The Xth century furnishes us with no specimens of articles of domestic use. The frequent inroads of the Saracens into Italy from the middle of the IXth century, the irregularities which disgraced the chair of St. Peter in the Xth, the invasion of France by the Normans, and the civil wars, in the midst of which the race of Charlemagne perished, were events calculated to paralyse the arts, and to quench almost everywhere the torch which that great man had kindled. The expectation of the end of the world, which, according to popular belief, was to happen at the close of the Xth century, combined with the calamities above mentioned to plunge the nations of Europe into gloom and apathy. The cultivation of the arts was almost universally abandoned.

New style of the XIth century.

No sooner, however, had the year 1000 closed in safety, and the dawn of a new century restored confidence to men's minds, than a wonderful activity was manifested by all classes. Kings, nobles, communities, and cities, began to vie with each other as to who should restore the ruined churches with the greatest splendour, and enrich them with the most costly plate and furniture. But, during the long lethargy which had prevailed, the traditions of the antique had been forgotten; besides which, something new was required for men roused, so to speak, to a new existence.

It was more especially in sculpture that the transformation displayed itself. To the regular conceptions of the ancients succeeded all the fancy of a new school emancipated from rules, and knowing no other bounds than those of the artist's imagination. This independence involved the artist in all the errors of inexperience. He began to practise upon mouldings, the archivolts of arches, and the corbels of capitals, on which the human face was often represented in the most grotesque and incorrect manner.

Character of the sculpture from the XIIth to the XVth century.

It was hardly till the commencement of the XIIth century that bas-reliefs and statues of large proportions were executed in a style which, without being free from faults, was at least restored to some measure of correctness. The Byzantine influence is here very perceptible. Long attenuated figures, a total absence of life, a severe and solemn expression, draperies arranged in

small and close parallel folds, and an overloading of oriental ornament in rich stuffs fringed with pearls and enriched with precious stones, these form the chief characters of the statuary of the XIIth century.

The adoption of a contemporaneous costume is also a distinctive feature of the new school of art, which had its rise in the XIth century. The figures of Christ, of the Virgin, of the Angels and Apostles, still retained the flowing robe and ample mantle of the ancients, but all the others were clothed in the dress which the artist had daily before his eyes; the arms, utensils and furniture of his own times were introduced into his compositions, whatever might be the age or country to which his subject belonged.

From the close of the XIIth century, great progress was made in statuary. Up to that period the similarity of the faces leaves no room to doubt that the artists had some received model from which they uniformly copied, but they now began to lay aside this servile imitation, and gradually adopted a more natural style; their ornaments were borrowed from native plants; the design was improved without the style of sculpture losing its originality.

We remark, from the beginning of the XIIIth century, more of ease and movement in the attitudes, and expression in the faces, while more ample draperies were arranged with taste and elegance. At the end of this century, France possessed an original style of art, in no wise indebted to that of the ancients or to that of the Byzantine school; the cathedrals of Chartres, Rheims, and Amiens, contained thousands of statues and bas-reliefs, real masterpieces in point of form as well as of religious expression.* The end of the

* At the end of this century, Christian sculpture had taken a praiseworthy direction, and had reached a degree of excellence from which, in point of sentiment, it only retrograded when it borrowed, in the sixteenth century, the style of Pagan antiquity, incapable as this must be of representing feelings and ideas of which the ancients had no conception. As M. Charles Magnan justly observes, "La beauté chrétienne n'est pas la beauté païenne. Le développement des épaules et de la poitrine, ces signes caractéristiques de la force dans le sens le plus physique, ne sont pas les attributs de la sainteté; et qui n'a étudié que la statuaire antique n'est pas suffisamment préparé pour comprendre la statuaire du moyen âge. Dans la statuaire de l'antiquité, les sens parlent aux sens; dans la sculpture moderne, c'est un dialogue pour ainsi dire entre les sens et l'esprit: la statuaire grecque produit en nous un sentiment très pur, le sentiment du beau, mais du beau physique; la statuaire chrétienne développe le sentiment du beau physique et du beau moral, et plutôt le dernier que le premier."—*Notice sur la statue de la reine Nantchilde.*

XIIIth century may perhaps be regarded as the finest epoch of mediæval art.

In the XIVth century, the design is often less pure, more attention is given to detail than is paid to general effect, the draperies are somewhat tortured, the faces of satyrs and grotesque animals re-appear in the ornaments.

To these general characteristics of monumental sculpture in France, Germany, England, and Flanders throughout the middle ages, we must add one observation, which is, that during all this period architecture was looked upon as the art *par excellence*, to which all others were kept subordinate. The architect, chief of the artists, not only regulated the plan of the work, but selected the subjects for execution; his alone were the ideas, to which painters and sculptors were to give a tangible form.

Fig. 5. Oliphant. XIVth cent. Coll. Soltykoff.

In the sculptures of this period on a small scale, the artists were less shackled, and exhibit more originality. They are, nevertheless, influenced by the prevailing style of the day, and, even in their case, we observe the pre-eminence conceded to architecture, in their borrowing from it continually the decorations for their works. This general tendency, combined with the adoption of a

contemporaneous costume, affords great help in determining the date of specimens of mobiliary sculpture.

The wars of Charles VIII. and Louis XII. had been the means of making the French artists acquainted with the treasures of antiquity, and the fine style of the Italian sculptures belonging to the XIVth and XVth centuries. This they turned to account, and without entirely losing their originality, attained to more correctness and purity of form and closer imitation of nature. To this French school we are indebted for many very beautiful works.

As a specimen of the sculptured ivory of the XIVth century, we give (Fig. 5) a large oliphant, or warder's horn, profusely decorated with foliage and spirited figures of men and animals. This kind of horn was much used from the first centuries of the middle ages, and whatever the substance of which it was made, was in general richly ornamented. It was borne by a page or squire, and often by the knight himself. The oliphant was used in war and in the chase; it also served in castles to give the alarm or to announce the arrival of a stranger of distinction. We find it mentioned in the old inventories. Thus we meet in that made in 1379 of the furniture and jewels of Charles V., "Ung cornet d' yvire bordé d'or, pendant à une courroye d'un tissu de soie, ferré de fleurs de lys et de daulphins d'or." *

Mobiliary sculpture of the XVIth century.

Not long after, the artists invited from Italy by Francis I., introduced into France the Italian style of the XVIth century, to which has been given the name of "Renaissance." The last traces of the former school of national art completely disappeared; the imagination of our sculptors of small objects was exercised exclusively on the mythological or poetical subjects of Greece, while all furniture and articles of domestic use were speedily covered with fantastic scrolls and arabesques—a style of ornament most admirably adapted to such a purpose, and brought back into fashion by Raffaelle and his pupils. We shall have occasion to return more than once to the character of the Italian school of the Renaissance, which lasted throughout the whole of the XVIth and, with some modifications, through a third part of the XVIIth century.

* Ms. Bibl. roy., no. 8356, fol. 213.

§ 2. SCULPTURE IN IVORY, IN WOOD, AND OTHER SOFT SUBSTANCES.

The most numerous specimens that have reached us of mediæval small sculpture, consist of diptychs and triptychs of ivory.

Diptychs and triptychs of ivory.

These diptychs are of very early date. They were formed originally of two little tablets of wood or ivory folding one over the other like a book, the interior of which presented a surface of wax prepared for writing. Hence the names of διπτυχα, and of *pugillares*, the former bestowed on them on account of their double fold,* the latter with reference to their small dimensions, which allowed of their being held in the hand or *fist*. These tablets were tied round with linen threads on which wax was melted, and impressed with a seal, and they thus served for conveying secret messages.

The diptychs were soon employed for a more interesting purpose. From the time of the emperors, it was the custom for the consuls and superior magistrates to make presents of ivory diptychs, carved externally with sculptures in bas-relief. These they sent to their friends to preserve the remembrance of their elevation, as well as to the principal persons who had voted in their favour, and also to the governors of provinces. On these diptychs was generally represented the person of the consul arrayed in his official robes, with inscriptions setting forth his names, his titles, and the denomination of his ancestors; and frequently the games of the circus with which he had amused the people at the period of his elevation to office.

These are known by the name of *consulares*, and although very interesting, must be passed over, belonging rather to the latter times of antiquity than to the middle ages. (Fig. 6.)

At a later period when the Roman empire had adopted the Christian religion, the consuls sent diptychs to the principal bishops also, and these receiving them as a testimony of good-will and respect to the Church, placed these diptychs upon the altars, that the magistrate who gave them might be recommended to the prayers of the congregation at the

* The word διπτυχα derives its etymology from δις, twice, and πτυσσω, I fold; thus when leaves were added to those tablets, they took, according to the number of folds, the name of τριπτυχα, πενταπτυχα, &c. (Gori, *Thesaurus diptycorum*. Florentiæ, 1759, t. i. p. 1.).

celebration of mass. Such is the origin of *ecclesiastical* dip-

Fig. 6. Ivory Diptych of the Consul Clementinus. VIth century. Féjervary Collection.

tychs, divided by Gori * into four classes: 1. Those on which

* Gori, as quoted before, t. i. p. 242.

were inscribed the names of the neophytes, or newly-baptised; 2. Those which received the names of benefactors to the Church, of sovereigns, and bishops; 3. Those which recorded the names of the saints who had edified the Church by the glory of their martyrdom or the lustre of their erudition; and lastly, those upon which were inscribed the names of the faithful, clergy and laity, who had died in the bosom of the true Church. The subjects of the carvings which enriched the exterior of these diptychs, being taken from the New Testament, they appeared, after the fall of the empire, very suitable for decorating the covers of books of prayers, to which use we owe the preservation of a great number.

Fig. 7. Ivory Archangel. British Museum

During the persecutions of the iconoclastic emperors, the Greek artists produced a great number of portable sculptures, and multiplied in the diptychs, and small pictures with folding leaves, doors, or shutters (*à volets*), all these images and paintings so odious at Constantinople, and which thus escaped the universal proscription.

When the persecution had ceased, the use of these pictures was universal, and continued in succeeding centuries. The crusader, the traveller, the poorest pilgrim, enclosed in diptychs and triptychs of wood and ivory the

holy images he devoutly carried with him, and before which he daily prostrated himself to offer his prayer to God. (Fig. 7.) Some were also made of large dimensions, and placed over a "prie-dieu," or devotional chair, in private rooms.

Nobles, and even kings, always kept them among their treasures. A great number are enumerated in the inventories of the XIVth century; they are thus designated:—"Ung tableaux d'yvire de deux pièces historiez de la Passion."—"Ung tableaux d'yvire de deux pièces très menument ouvrez et historiez."* In the XIVth century the back ground was often coloured, and the figures themselves decorated with painting and gold. All these "*tableaux closans*" were not carved on the exterior like the ancient diptychs, but in the interior, and the fragility of the carving was thus protected.

At the present time, when public attention is directed to the restoration of the churches of mediæval architecture, and endeavours are made to restore the interior decorations, bas-reliefs, mural paintings, and painted glass in the style of the age in which the churches were erected, these little ivory pictures will furnish painters and sculptors with useful models of which it is desirable they should avail themselves. We do not say they should imitate the incorrectness of drawing we often find, but uniting as they might the ideas of these olden times with the skilful execution of the present, the result would be the production of works alike faultless in point of science, of drawing, and of archæology.

The consular and ecclesiastical diptychs had taken much larger dimensions than the pugillares, and probably gave rise to the "*retable*," or "tables," which were placed above the altar, after the manner of a modern altar-piece.

Portable altar-pieces.

Until the IXth century, the altars were destitute of ornament;† it was not until the Xth century that the cross began to be placed upon them. Before the XIVth century neither the candlesticks nor the cross

* *Inventaire de Charles V.* MS., as quoted before, folio 242.

† The ancient altar was generally a square table, sometimes in the form of a tomb, a custom probably derived from the earliest ages of Christianity, when the Christians held their religious assemblies in the Catacombs, and the tomb of a martyr was chosen to serve the purpose of an altar. Altars were sometimes placed against the wall, but the high altar was always isolated.

were stationary upon the altar. When mass was about to be celebrated, two acolythes * carried the candlesticks, and the officiating priest the crucifix, which they placed upon the altar, and when service was over, both candlesticks and crucifix were carried back to the sacristy. Nor did they place over the altar or behind it, those tabernacles or "*contre-retables*" † which were in the XVth century, and particularly in Germany, as high sometimes as the roof of the church. The reason was this—that until the XIIIth century, the bishops presided at the services of the church upon a throne placed at the end of the apsis,‡ and so the addition of an altar-piece would have intercepted the view of the clergy and the congregation.§ But when, in the XIVth century, altars were multiplied in the churches, and the seat of the bishop displaced, it began to be the custom to carry with the crucifix and candles portable retables, which were placed upon the altar during mass, and afterwards carried away with the other ecclesiastical utensils that had been employed in the ceremony. The large ivory diptychs and triptychs were appropriated to this use; the first portable altar-pieces could not have been of larger dimensions.

Although these portable altar-pieces were not very large, two or three sheets of ivory were not sufficient to make them. They were therefore formed of several small slabs *(plaques)* ‖ of ivory, and oftener of bone, the edges of which were brought close together and enclosed in a frame, often of a fine marquetry of wood and ivory, a work much in fashion in the north of Italy in the XIIIth and XIVth centuries.

If we have not yet spoken of ivory carvings of profane

* "*Acolythe.* The highest of the minor orders in the Roman Church, whose office it is to bear the candlesticks and crewets containing the wine and water for the celebration of the Eucharist."—Pugin.

† *Contre-retable* wainscoting decoration raised above an altar to receive the altar-piece (*retable*), which was generally a bas-relief or painting, representing the saint to whom the altar was dedicated. This bas-relief or painting had sometimes folding-doors or wings (*volets*) which could be closed over it.

‡ *Apsis.* A spacious semi-domed recess which terminated the end of the ancient basilicas and churches. The apsis consisted of two parts, the altar and the presbytery or sanctuary. In the centre of this semicircular space and separated from the nave by an iron railing, was the throne of the bishop (the "tribune" of the ancient basilicas), afterwards called *cathedra.* In front of this stood the altar. The apsis consequently formed the most sacred part of the church, and was always ornamented, even when the other parts of the building were comparatively plain.

§ De Caumont, *Cours d'ant. mon.*, t. vi. p. 165, *et seq.*

‖ The word *plaque* is now generally received as applied to slabs of ivory, metal, &c.

subjects, it is because until the end of the XIIIth century religious subjects alone engaged the attention of artists; but when, in the XIVth century, romances began to enter into competition with pious legends, the artists in ivory enriched their caskets * and domestic utensils with scenes from these marvellous histories. Leaving subjects which were fettered by the rules of conventional representations, their imagination was able to take a wider range; therefore we can better learn from these profane than from sacred subjects, the style proper to the artists and genius of that period. Nevertheless, religious subjects were always most in request, and profane subjects of the XIVth, and even of the XVth century, are very rare.

Sculpture of profane subjects.

We see that in the middle ages small pictures in ivory were sculptured in considerable numbers. In the XVIth century they were discarded and neglected, as everything else that departed from the style of the antique; but many have escaped destruction, and are now much sought after for museums and collections, because, independently of their own merit, they serve to retrace the history of sculpture during a long period.

Of the artists who during four centuries carved these exquisite statuettes, so full of feeling and expression, and the bas-reliefs of such charming simplicity, the names have unjustly been suffered to fall into oblivion, overpowered by the fame, so often usurped, of their successors. We esteem it a duty and a tardy reparation to make known their names, which patient archæologists are now trying to discover; among which we would point out to them that of Jean Lebraellier, who is designated in the inventory of Charles V. as having carved "deux grans beaulx tableaux d'yvire des troys Maries." † This artist, who carved for the king, must have been one of the first of his time.

We now retrace our steps to describe Byzantine sculpture from the XIth century.

* Casket (Fr. *Coffret* or *layette*). This was probably used by ladies for holding their jewels and articles for the toilet. The *coffret* with the *bahut* (a trunk-shaped chest) formed the furniture brought by the bride to the house of her husband; and they were decorated according to the circumstances of the parties for whom they were intended.

† MS. Bibl. roy., no. 8756, fol. 232.

During the long and glorious reign of Justinian, art maintained its position at Constantinople, without progress and without decline, and professed long after him to adhere faithfully to the traditions of antiquity. Yet from this period the style which has received the name of Byzantine, began to develope its distinctive character. Its appearance is marked by the peculiar harshness of the outlines, the meagreness of the forms, the elongation of the proportions, the richness of the costumes. The heresy of the iconoclastic emperors accelerated the decline of the arts, and proved particularly fatal to sculpture. Basil, the Macedonian († 886) * restored images, and gave to the arts such encouragement as raised them from their depressed condition. Constantine Porphyrogenitus, who reigned from 912 to 959, followed in the steps of his grandfather. Himself a scholar and an artist, he favoured the study of arts and letters, and set an example in his own personal labours. Hence the school of Constantinople was still in the Xth century a learned school, from which Italy and Germany borrowed artists. It was from Constantinople that the celebrated Pala d'Oro was ordered by the Doge Orseolo for the church of St. Mark; and about the same period, the emperor, Henry II., invited Greek artists to his court. In 1066, Didier, abbot of Monte Cassino, caused works to be executed in that celebrated abbey by artists of this school; † and lastly, the bronze gates of San Paolo-fuori-le-mura, near Rome, were cast at Constantinople in 1070, by order of Hildebrand, so celebrated afterwards as Pope Gregory VII.

Byzantine sculpture from the XIth to the XVIIth century.

It would appear that in the XIIth century the best artists of Constantinople emigrated to the West; for from this date art rapidly declined in the imperial city. Attacked on the eastern side by the Arabs and the Seljukian Turks, and on the western by the Bulgarians, the empire was curtailed in its limits, and lost its strength. The invasion of the Crusaders added to these calamities, and the emperors who filled the throne during the XIth and XIIth centuries were too much occupied in the defence of their territory to pay any attention

* When the mark (†) is prefixed to the year, it indicates the date of the death of the individual.

† Leo of Ostia, *Chro. cas.*, l. iii. c. 28.

to the arts. The sack of Constantinople by the Latins in 1204 gave the final blow to the arts in that ill-fated city. Statues, vases of gold and silver, and all the remaining objects of art of every description, fell a prey to the ignorance and avarice of the conquerors. Other causes had drawn Byzantine art into a fatal path. Although the iconoclastic war was at an end, the worship of images had received a blow from which it could not raise itself. Sculpture was in the first place less employed, statues never admitted into places of worship, and this exclusion became, as it were, a sacred law in the Greek Church.* The apprehensions, also, of the bishops, that the enemies of images might see in them occasion of scandal, rendered even more severe the laws which prohibited artists from departing from the rules prescribed to them by ecclesiastical discipline. Confined within these narrow limits, unable to give any scope to their imagination, they made, as it were, a picturesque liturgy, and followed, in all their works, the one pattern established by custom. An overloading of ornament, until then unknown, and extreme finish and minute details in the costume of the persons, appear to absorb all the faculties of the sculptor.

Further, in order to prevent any deviations on the part of the artist, a book was prepared containing precise instructions for the representation of every object connected with religious history and symbolism; and in which everything was marked out, even to the wording of the accompanying inscriptions. This code became from that time, and ever after, the invariable rule of every artist of the Oriental school. It is to M. Didron, the learned secretary of the Historical Committee of Arts and Monuments, that archæological science is indebted for a knowledge of this curious manual of Greek iconography. He, and M. Durand, while travelling through Greece in 1839, were astonished to see in the churches of successive centuries, the subjects and persons depicted, invariably treated in the same manner. Thus, at St. Luke's, the Baptism of Christ, or the Descent of the Holy Ghost, Moses or David, were represented in mosaic precisely as the same subjects were painted in fresco at Cesarini; yet St. Luke is of the Xth century, and Cesarini of the XVIIth;

* D'Agincourt, *Hist. de l'art*, t. i. p. 63.

they found again at Athens, Mistra, and St. Luke, the same St. John Chrysostom that M. Durand had copied from the baptistry of St. Mark at Venice. After leaving Attica, they employed a month in visiting the monasteries and cells of Mount Athos. All the paintings existing on that holy mountain were identical with those they had seen elsewhere. M. Didron having complimented a painter of Esphigmenou upon the extraordinary ease with which he traced upon the wall the sketch of a rather complicated subject, "That is less extraordinary than you may think," replied the painter; "here is a manuscript which teaches us all we ought to do; here we are taught the preparation of our lime, our pencils, and our colours, the composition and arrangement of our pictures; and here we find written the inscriptions and sentences we have to paint, and which you hear me dictate to my pupils."

The title of this manuscript was Ἑρμηνεια τῆς ζωγραφικῆς, "The Guide to Painting." It was to be found in every workshop of Mount Athos, where they think it was composed in the XIth century. M. Didron did not leave Greece without having secured a copy, which M. Durand has translated, and M. Didron published it in 1848 with interesting notes, under the title of "Manuel d'iconographie Chrétienne."

After the taking of Constantinople by the Turks, those among the Greek artists who had emigrated to the West, retired to the convents of Mount Athos, which already contained artists of every kind, and the holy mountain became from that time the sole focus of religious art in the Oriental Church. The monks of Mount Athos have continued to the present time to devote themselves to works of this class.

About 150 to 200 years ago, some artists of this school settled in Russia. The towns of Kiew and Viazma have become the principal centres of the manufacture of these religious carvings. The Russian artists have preserved the mediæval types, and seldom deviate from the rules traced by tradition and the "Guide." The inscriptions in the Russian language which accompany these little works, are generally in Sclavonic characters, which are more used in books of devotion, and seem to distinguish them from the works executed in Greece.

Wood-carving of the XVth century.

From the beginning of the middle ages, until the end of the XIVth century, stone, in monumental sculpture, and ivory in the small mobiliary decorative sculpture, had always been in high favour, and preferred to every other material. At this period, wood became much in fashion, and furnished the sculptors with abundant materials, which they knew how to turn to advantage, in carving doors, altar-pieces, and statues of admirable finish and highly complicated details. Statues, even of large dimensions, were carved of pieces of oak, a wood well calculated by its hardness, for this kind of work. In the inventory of the treasure of Charles V. in 1379, we already find, but in small number, allusions to statuettes and pictures carved in wood. Girard, of Orleans, is named in it as having made for the king "ung tableaux de boys de quatre pièces." *

It was principally in the retables or altar-pieces, which, in the XVth century, were generally of large dimensions, that the art of carving in wood developed itself. In France, at the end of the reign of Louis XI., under Charles VIII., Louis XII., and even as late as Francis I. some were seen of a very great height † displaying all the most delicate workmanship that the sculptor of the time could produce, and presenting, amidst the architectonic decorations of the period, subjects sculptured in high relief, and containing a considerable number of small figures.

German altar-pieces of carved wood.

The Germans especially devoted themselves to this style of decorative sculpture. According to Dr. Kugler, it originated in Germany, where it was already in high favour at the end of the XIIIth century.‡ It is certain that, notwithstanding the destruction of a large number of these altar-pieces at the epoch of the Reformation, many very important specimens are still to be met with in Germany, and more especially in Suabia.

Among the most remarkable products of German sculptors in wood, may be specified those of Lucas Moser, at Tiefenbronn, executed in 1431; at the same place, a Descent from the Cross by Schühlein, in 1468; at Rothenburg, those of

* MS. Bibl. roy. no. 8356, fol. 232.
† De Caumont, *Cours d'ant. mon.*, t. vi. p. 176.
‡ Kugler, *Handbuch der Kunstgeschichte.* Stutgard, 1842, S. 770.

the high altar of the church of St. James, 1466; at Bamberg, in the chapel of the Sepulchre, the magnificent coloured altar-piece of Adam Kraft († 1507); and in the cathedral, the bas-reliefs of Veit Stoss (1523); at Nuremberg, the great medallion suspended from the roof of the church of St. Lawrence, representing the Annunciation by the same artist, dated 1518; and lastly, in the cathedral at Schleswig, the altar-piece carved by Hans Brüggemann, in 1521. Some altar-pieces are of gigantic proportions, and reach almost to the roof of the church. We may cite among the most curious of these, that of the high altar of the church of St. Kilian, at Heilbronn, of the beginning of the XVth century, and particularly those of a more recent date in the church of St. Ulrich, at Augsburg.

One of the peculiar characteristics of this German sculpture of the XVth century, is its being usually painted and gilded. The taste for polychromatic sculpture was, moreover, so universal in Germany, that we often find statuettes of gold and silver coloured. (Fig. 8.)

Fig. 8. Statue-painter,* from a miniature of the XVth century. Impl. Lib., Paris.

We also find in Germany, a considerable number of altar-pieces of the second half of the XVth century, and the beginning of the XVIth, in the execution of which, the sculptor and the painter have combined their talents. The central part, hollowed out as a recess, represents a large subject in high relief, which is covered over with the wings or shutters when closed. These wings are enriched, both inside and outside, with paintings, the work of the first German masters of that period. It was on these occasions the painter who

* Fr. *Peintre imagier.*

furnished the design for the sculptured part of this species of triptych; he superintended its execution, and often worked at it himself.* We sometimes meet with imperfect specimens of these works; the painted wings, regarded as pictures, have been transferred to museums, and the sculptured part, less valued, and separated from the wings, has either been left in the churches or destroyed. At Vienna, for instance, in the fine gallery of Prince Lichtenstein, are two of these wings or folding-doors painted by the hand of Albert Durer, of which the centre-piece, in all probability sculptured, is no longer in existence.

In addition to these large altar-pieces are smaller ones, intended for the decoration of chapels and oratories, or to be placed at the head of the bed, and which may, from their size, be reckoned among the objects of domestic use. They are generally of delicate and careful execution, and there is no doubt that the best artists of Germany devoted themselves to this kind of work. In Germany they received the appropriate name of house-altar (*Hausaltärchen*).

Minute wood-carvings in the style of the XVth century.

Among the artists who carved wood with such perfection in France and Germany, there were some who in the XVth century, and until the beginning of the XVIth, applied themselves to the execution of works in the Gothic style, so extremely minute that a magnifying-glass is often required to distinguish all the details. In a few square millimètres† they frequently represent scenes containing twenty figures. If the artists who executed these minute works had only their patience to recommend them, there would be but little merit attached to their works; but many of these fine carvings unite with the extreme delicacy of their execution, judicious composition, correct drawing, and figures and attitudes full of feeling and expression.

Italian sculpture of the XVth century.

The movement which had in the XIth century impelled art into new life in France, Germany, and Flanders, was not fully shared in by Italy; sculpture at the end of the XIIth century, had reached in that country the lowest stage of ignorance and coarseness. But the XIIIth century gave birth to Nicholas of Pisa, with

* Kugler, *Handbuch der Kunstgeschichte*, S. 771.

† The millimètre is about $\frac{1}{25}$ of an English inch.

whom commenced the revival of the art. It is known that among the multitude of ancient marbles brought home by the Pisan fleet at the time of building the cathedral of Pisa, was a bas-relief representing two subjects taken from the story of Phædra and Hippolytus. The Pisans, struck with the beauty of this masterpiece, used it in the decoration of the front of their cathedral. The youthful Nicholas joined in the general admiration, but he alone conceived the idea of again producing works of so elevated a style; he earnestly applied himself to the study of this bas-relief, and of other valuable relics of ancient sculpture, and soon surpassing the models of his masters, he effected a complete revolution in the art.

Under his direction, his son, John, became an eminent sculptor, and even ended by excelling his master. In the XIVth century, Andrew of Pisa continued the work of these great artists. He was a less servile copyist of the ancients, and showed more original talent; he rendered also important services by bringing to perfection all the technical department of his art. The brothers, Agostino and Agnolo of Siena, Orgagna, architect and sculptor, (†1389), and several others, succeeded until the end of this century in keeping the art to the more elevated path upon which it had now entered. At the beginning of the XVth century, the revival was complete, and sculpture, under Donatello, (†1406), and Ghiberti (†1455), had attained the highest point of perfection.

These great geniuses were powerfully assisted in their work of regeneration by a host of skilful contemporaneous sculptors, their pupils or their imitators. After them should principally be mentioned Simone, brother of Donatello, Antonio Rosellino, and Bernardo, his brother, Giuliano and Benedetto da Maiano, Luca della Robbia, Pietro and Antonio Pollaiuolo, Andrea Verocchio, and Desiderio da Settignano, who was snatched away at the age of twenty-eight, from an art of which, to judge from the works he has left, he would have been one of the brightest ornaments.*

* Vasari says, in his Life of this artist, "Desiderio imitated the manner of Donatello, but he possessed a grace and an elegance peculiar to himself; the heads of his women and children exhibit the most charming delicacy and softness, qualities which he

The works of these great masters were all monumental, and mostly designed for the decoration of churches, palaces, and mausoleums. The only monuments of private life that are comprised in the higher branches of sculpture are portraits, and of these the masters we have enumerated have left specimens which are now preserved in the palaces and museums of Italy.

Small German sculpture in wood and stone in the first half of the XVIth century.

The influence of the great Italian artists was felt throughout all the countries of Europe from the end of the XVth century, and especially in the first year of the XVIth. Yet, towards the middle of this century, the greater part of the German artists, having borrowed nothing from the Italian style, perserved in their works the stamp of peculiar originality. Of this we may judge by the small sculpture of the Germans in the beginning of the XVIth century.

At this period, Nuremberg, the residence of Adam Kraft (†1507), Michael Wöhlgemuth (†1519), Peter Vischer (†1529) and his sons, Veit Stoss (†1542) and the great Albert Durer, became the artistic centre of Germany, the resort of all who desired to cultivate the arts. Under the auspices of these great masters was formed, as it were, a nursery of artists, who devoted their talents to the service of various manufacturers. Domestic utensils of every description were conceived in such pure forms, and enriched with such exquisite ornaments and such graceful little figures, as to make them eagerly sought after at the present day as true specimens of art.

Among these second-class artists, the most skilful produced at that time a large number of small carvings, remarkable for their imaginative conception, their correctness of design, and finished execution. The materials employed were wood, alabaster, a soft marble (*feinen Marmor*), and various sorts

derived as much from nature as from his own skill as a workman." Cicognara (*Storia della scultura*, t. ii, p. 70) describes still better the characteristic merits of Desiderio in terms which a translation would only weaken. "Condusse il marmo con una mollezza singolare ed una pastosità che alle morbide carni lo rendeva rassomigliante." D'Agincourt (*Hist de l'art sculpt.*, t. ii., p. 82) justly remarks that Desiderio excelled in the composition and the execution of his ornaments. To this sculptor is attributed the exquisite bust in the Louvre, of Beatrice d'Este, at the age of twelve. This princess married Ludovico Sforza "il Moro," and died 1497.

of stones, but especially hone-stone* a compact, fine-grained magnesian limestone, now used for lithography. This stone, which, in the north of Germany, is called *Speckstein*,† is designated under that of *Kehlheimer-Stein* in the Cabinet of Medals and Antiques at Vienna.‡

Fig. 9. Birth of St. John. Carving in Speckstein, by Albert Durer, XVIth century. British Museum.

The most celebrated artists in this style are Ludwig Krug (†1535), of whom there is a fine relief representing the Fall

* Soapstone. Talc Steatite, *Haüy*. Speckstein, *Werner*.
† Kugler, *Handbuch der Kunstgeschichte*, S. 781.
‡ Joseph Arneth, *Das K. K. Münz und Antiken-Kabinet*, Wien, 1845.

of Man, in the Chamber of Arts * at Berlin, Peter Flötner (†1546) who carved both wood and stone in perfection, and Johann Teschler (†1546).

Nor did the first artists of the period disdain to devote themselves to this diminutive kind of sculpture. Dr. Kugler † mentions, as being certainly from the hand of Albert Durer, an alto-relief in speckstein, the Birth of St. John, dated 1510, preserved in the British Museum (Fig. 9); a Preaching of St. John the Baptist, also in alto-relief, in the collection at Brunswick; and two little statuettes, Adam and Eve, in the Cabinet of Curiosities at Gotha. We have seen at the house of M. Melchior Boisserée at Munich, two bas-reliefs upon wood, from 4 to 4½ inches high, with the monogram of Albert Durer; they both represent the Virgin standing with the infant Jesus in her arms; one is dated 1515, the other 1516. It is impossible to find anything of its kind more exquisite. In the museum called the United Collections,‡ at Munich, are also two little bas-reliefs in soft marble, bearing the monogram of the great German artist; the one represents an undraped female figure seen from behind, the other the same figure in front. In this collection are several circular bas-reliefs in speckstein, attributed to Lucas Kranach, and many bas-reliefs in wood supposed to be by the same artist. The Chamber of Arts at Berlin, contains a little domestic altar, finely executed, on which is engraved the monogram of Hans Brüggemann, to whom is due the fine altar-piece in the cathedral of Schleswig, and a little figure of the Apostle St. James, carved in wood in bas-relief, full of expression and of delicate workmanship, with the monogram of Hans Schäuffin (†1550), a distinguished painter, the pupil of Albert Durer. In the Cabinet of Medals of the Imperial Library at Paris, may be also seen a small bas-relief in wood, marked with a monogram, considered to be that of Lucas of Leyden.

It was in portraits especially that the small German sculp-

* *Die Kunstkammer* (Chamber of Arts). A museum formed by Frederic William III. to contain the works of the Middle Ages and the Renaissance.

† Kugler, *Handbuch der Kunstgeschichte*, S. 781.

‡ *Die vereinigten Sammlungen* (the United Collections). A museum formed by Louis, King of Bavaria, for containing the collections of the Middle Ages and the Renaissance. The jewellery is preserved in the "Chambre du trésor," and the "Riche Chapelle" of the Royal Palace.

ture attained perfection. These works, which bear the stamp of the school of the "Naturalisti,"* are so pure in style and of such remarkable finish, as to rank among the noblest productions of German art, and bear a comparison with the finest medallion portraits executed by the Italian artists.

Portraits upon wood and stone of the German school of the XVIth century.

In this species of sculpture the city of Augsburg rivalled Nuremberg. The portraits of Nuremberg are more generally worked in stone, those of Augsburg upon wood.† The characteristic of the first is a decided and firm style and great ease of execution; in the other, we find a truthful observation of nature, united with much grace and finish.

Some early productions of the XVIth century are by Albert Durer himself, more still by his pupils; and among the artists of Augsburg, Hans Schwartz is spoken of as the most skilful.

This application of sculpture to small portraits, and particularly to medallion portraits, was much in fashion in the XVIth century; the finest specimens belong to the period between 1500 and 1530. These productions of the art, held deservedly in high estimation, are carefully preserved, not only in private collections, but also in public museums. There are many of these medallion portraits in the Chamber of Arts at Berlin; some bearing the monogram of Albert Durer. The United Collections at Munich contain, among other medallion portraits upon wood, those of Kreler and his wife, attributed to Durer, and dated 1520; and a fine portrait of a female with the name of Jacoba, carved in speckstein, attributed to Lucas Kranach: in fact, this portrait appears to be that of the woman who has so often served as a

* An expression used by the Italians to designate one of the two rival schools of painting at the end of the XVIth and in the XVIIth century, the Eclectics and Naturalisti. The Eclectics endeavoured to select and unite the best qualities of each of the great masters, the study, and almost servile imitation of whose works were the fundamental principles of the school of which the Caracci were the founders, and among whom were Domenichino, Guido, Albano, Carlo Dolce, &c. The Naturalisti were so called from their imitation of nature; they endeavoured to form an independent style, distinct from those of the great masters, but their predilection was not for nature in a refined state, but for common nature devoid of physical elevation and divine impulse. They excelled more in scenes of murder, sorcery and witchcraft. Caravaggio, Spagnoletto, and Salvator Rosa are the principal masters of this school. —Kugler's *Painting in Italy.*

† Kugler, *Handbuch der Kunstgeschichte*, S. 782.

model for his paintings. At Vienna, these portraits are so highly esteemed as to find a place in the Cabinet of Medals, by the side of the finest cameos and the admirable works of Cellini. There are some in the museum of the Louvre, and also in the Cabinet of Medals at the Imperial Library; but of all the collections in Paris, the richest in medallion portraits upon wood is that of M. Sauvageot. The most remarkable is the portrait of Raymond Fugger, the celebrated banker of Augsburg, who was a great lover and powerful patron of the arts.

Irrespective of their artistic merit, these portraits are now of great historical value, and are certainly the best that are to be met with of all the celebrated characters of the great epoch of the XVIth century.

In the XVIIth century, the German artists still worked upon the speckstein, and they then applied themselves to making little detached busts (*de ronde bosse*).*

Wood-carvings of the second half of the XVIth century.

Towards the middle of the XVIth century, the Italian style of the Renaissance became universally diffused, and in France, Flanders, and especially in Germany,† superseded whatever character of originality the artists of these countries had until then preserved. It is hence often difficult to determine with exactness the origin of the small works of art belonging to the second half of the XVIth century.

The style of the Renaissance was one of elaborate decoration, and proved highly favourable to the progress of artistic industry, and we consequently find in the furniture, domestic utensils, and ornaments of that period, perfect grace and elegance, combined with purity of form.

The sculptors delighted in decorating all such objects with lovely arabesques, festoons of flowers and fruit, branches, animals, and human figures, arranged in the most fantastic manner; forming exquisite compositions in beautiful harmony with the objects they served to enrich.

In the XVIIth and XVIIIth centuries, the artists followed for the most part the prevailing taste of their time. Thus, we

* *Ronde bosse*, an isolated or detached figure: full relief. *Haute bosse*: high relief.

† Dr. Kugler, *Beschreibung der Königl. Kunstkammer zu Berlin.* Berlin, 1838, S. 154.

trace from the beginning of the XVIIth century, the predominance of the style of the Flemish school, which the great success of Rubens and his pupils had brought into fashion. The elegant, ideal style of the Italians, was replaced by the style of the "naturalisti," carried sometimes to excess. Many artists however avoided exaggeration, and copied nature faithfully without departing from the rules of good taste.

In the XVIIth and XVIIIth centuries.

Among the most celebrated of these is François Du Quesnoy, better known under the name of François Flamand, born at Brussels 1594 (†1644). At the age of twenty-five he went to Rome to study the chefs-d'œuvre of the great Italian masters, and was obliged for his subsistence to execute small works in ivory and wood, which were the foundation of his reputation. No artist has carried to greater perfection than François Flamand the carving of statuettes and figures of children.

Towards the end of the reign of Louis XIII., the influence of Nicholas Poussin (†1665), and of Eustache Lesueur (†1655), was exercised in the direction of a purer and severer style, which prevailed also in the earlier years of the reign of Louis XIV., but which gave way ere long to excess of ornament; and the artists aiming at the *grandiose* style of the Grand Monarque, gave their works a character of heaviness and pomp totally at variance with good taste.

In the XVIIIth century, all true grandeur of style was crushed under the weight of decoration, yet the ornamental artists still displayed ingenuity of arrangement as well as delicacy of workmanship.

We have thus pursued our inquiry as far as the XVIIIth century, in order to finish our observations upon carving in wood; we must now retrace our steps to attend to carvings in ivory.

The taste which prevailed in the middle ages for works of small dimensions in ivory was, as we have seen before, exchanged at the opening of the XVth century for that of carving in wood, and we consequently find few ivory carvings of the XVth century. But this beautiful substance was too well calculated for the purposes of decorative carving not to be restored to favour

Ivory carving from the XVIth to the XVIIIth centuries.

when the style of the Renaissance, pervading every branch of manufacture, imprinted its stamp upon arms, furniture, and all articles of domestic life. In the first year of the XVIth century, we find it used again in Italy, but the greatest progress in ivory carving was made in Flanders, Holland, and Germany, about the middle of the century. The artists of Nuremberg and Augsburg, who carved with such facility in wood and speckstein, would not fail to turn their attention to this branch of the art. There are in the museums of Munich, Vienna, and Berlin, a quantity of ivory vases covered with exquisite carvings. The rich mountings of these vases in gold and silver-gilt, which denote a workmanship of the XVIth and the early part of the XVIIth century, are often impressed with a stamp representing a fir-cone, the mark of the goldsmiths of Augsburg. May we not, therefore, infer from this, that the goldsmiths of that city occupied themselves at that time in the carving of ivory? *

Moreover it is not astonishing that the German artists should devote themselves to this kind of work, for the sovereigns of that country were such passionate admirers of carvings in ivory, that they not only gave liberal encouragement to the artists, but many of them became skilful workers in ivory themselves. Augustus the Pious, Elector of Saxony (†1586), a great lover of the arts, and founder of the collection of the Green Vaults,† passed his leisure time in turning ivory, and among the specimens of his workmanship which are still be seen at Dresden, are some that are very remarkable; the Chamber of Arts at Berlin, contains a vase, the work of George William, Elector of Brandenburg († 1640). Maximilian, Elector of Bavaria, (†1651), was also a sculptor in ivory. In the king's palace at Munich, may be seen a lustre enriched with reliefs in good taste, and in the United Collections, a large quantity of vases and other subjects which were turned by that prince. In the Green Vaults at Dresden are shown two snuff-boxes, attributed to Peter the Great.

As ivory carving, like that of wood, adopted the style of

* Kugler, *Beschreibung der Königl. Kunstkammer zu Berlin*, iii. 205, 207; L. v. Ledebur, *Leitfaden für die Königl. Kunstkammer*. Berlin, 1848, S. 7.

† *Das Grüne Gewölbe* (the Green Vault) and *Das Historische Museum* (the Historical Museum) the two great collections of Dresden.

the age and the country where it was practised, we shall not return to what we have said before upon this point.

In the second half of the XVIth century, all sorts of domestic utensils were decorated with carvings in ivory. Many artists exercised their talent most successfully on the hilts of swords and daggers, the handles of knives and powder-flasks; they also treated subjects more elevated in style; and at the end of the XVIth, and during the first half of the XVIIth century, they produced statuettes of faultless workmanship. The thick part of the tusk of the elephant, which is admirably adapted for the body of a vase, was applied to this purpose; upon it were carved bas-reliefs of great merit, and mountings chased by the most skilful goldsmiths of the time, contributed to enhance its value. Sometimes cippi * were made of ivory, the bases and capitals of which, in bronze or silver gilt, are often remarkable for taste. Towards the second half of the XVIIth century, objects executed by the turning lathe were in great favour. In all ages crucifixes were carved, and many are of the highest merit. (Fig. 10.)

Fig. 10. Ecce Homo.
Ivory carving, XVIIth century.

Some specimens of carving in ivory are attributed to the first masters. In the Palazzo Vecchio at Florence, in the grand hall leading to the chapel, are several carvings in ivory, remarkable for their purity of style and beauty of execution; two of them, the Flagellation, and a St. Sebastian, are said to be the work of Cellini. The United Cabinet at Munich, contains a crucifix said to be by Michael Angelo; in the treasury at Vienna, is a cippus carved in alto-relief, Silenus supported by Satyrs, also attributed to him, and a crucifix, said to be Cellini's.

* *Cippus.* A small column sometimes without either base or capital, its chief ornament being an inscription commemorative of some event, or of some person deceased. The ancients placed them by the way-side to mark distances, or point out the road. The term is also applied to a small column supporting a figure, vase, &c.

These pieces are certainly of great artistic value, but nothing has yet been adduced to prove that these two great masters ever worked in ivory. The Silenus at Vienna, for instance, appears to us to belong rather to the Flemish school of Rubens, than to the severe style of Michael Angelo. Cicognara observes,* that the works in ivory attributed to Michael Angelo are so numerous, that to have been executed by him, he could have done nothing else during his whole life; besides, these carvings have much more the character of the school of Raffaelle. With regard to Cellini, we find nothing in his memoirs to lead us to suppose that he ever occupied himself with works of this kind.

It is, however, certain that very distinguished artists, to judge by their existing works, were carvers of ivory in the XVIth century, but the names of these modest and patient workmen, eclipsed by the brilliant geniuses of their age, have not been handed down to us.

Cicognara thinks the works in ivory of this period are due to the pupils of Valerio Vicentino and Giovanni Bernardi of Castel-Bolognese, all of whom were skilful draughtsmen and sculptors of great ability. These carvings may often indeed be placed upon an equality for delicacy of execution and purity of design, with the finest works of the cameo engravers of that period.

Among the Italian artists who in the XVIIth century worked in ivory, may be mentioned Alessandro Algardi, (†1654), to whom we owe the celebrated bas-relief of St. Leo going out to meet Attila, one of the finest ornaments of the Church of St. Peter at Rome. This skilful master was obliged in his youth, like François Flamand, to carve ivory figures for his livelihood.†

In Germany and Flanders, where the passion for ivory carving was so great, the names of the artists in ivory have been carefully preserved. Of these the most celebrated are:—

Copé, surnamed Flamingo, (†1610), who was born in Flanders and worked at Rome. He executed large basins and ewers decorated with sculptures in relief.

François Du Quesnoy, of whom we have already spoken, carried carving in ivory to the highest point of perfection.

* Cicognara, *Storia della scultura*, t. iii. p. 71. † Ibid.

Jacob Zeller, a Dutch artist. The Green Vaults contain a frigate of his workmanship, on the pedestal of which is

Fig. 11. Ivory Tankard after Rubens, or Jordaens. XVIIth century. Marlborough House.

represented Neptune driving sea-horses, a remarkable work, dated 1620.

Leo Pronner of Nuremberg, († 1630). He executed works of extreme delicacy, and in the same collection we

have cherry stones of his carving, upon which, with the assistance of a magnifying glass, as many as a hundred heads may be counted.

Christoph Harrich, († 1630) delighted in carving deaths' heads, and double figures, the one side representing a young girl, the other a skeleton.

George Weckhard and Lobenigke rendered themselves celebrated at the same period by their skill in turning; the latter also carved statuettes.

Van Obstal of Antwerp was a member of the Royal Academy of painting and sculpture at Paris, where he died in 1668, he might therefore be justly ranked among the French artists. He executed very fine carvings in ivory for Louis XIV.

Leonhard Kern, of Nuremberg († 1663), who flourished at Berlin, had long worked in Italy.

Angermann, of the same period, excelled in the execution of little skeletons.

Barthel, who died at Dresden in 1694. His finest pieces are copies of ancient groups, generally including animals; the Green Vaults contain two specimens of this artist, a bull led to sacrifice by the priests, and a horse attacked by a lion.

Pfeifhofen, who flourished about the same time, worked bas-reliefs.

Van Bossiut of Brussels († 1692). This artist, who resided for a long period at Rome, was one of the most skilful of his time. He modelled ivory with as much facility as wax, and excelled particularly in the figures of women and children. Many of his works are to be met with in Italy.*

The Ziek family of Nuremberg, produced adepts in the art of turning, from the beginning of the XVIIth century to the beginning of the XVIIIth. Lorenz Ziek († 1666), in imitation of the Chinese, carved balls, enclosed one inside another; his son Stephan († 1715), continued the same style of work, and produced some most singular pieces; namely, eyes and ears with all the machinery of seeing and hearing. The Green Vaults and the Chamber of Arts contain curious pieces by these two artists.

Among the artists of the XVIIth and XVIIIth centuries may be cited the following:—

* Cicognara, *Storia della scultura*, t. ii. p. 444.

The Norwegian, Magnus Berger († 1739), of whom there is a bas-relief in the Chamber of Arts, dated 1690.

Balthasar Permoser, born in Bavaria in 1650, died at Dresden in 1732, had worked fourteen years in Italy,* may be considered one of the best carvers in ivory. There are superb specimens of this artist in the Green Vaults, and particularly a copy of considerable size of the Rape of a Sabine, by John of Bologna.

Lück, who worked in 1737 at Dresden, made small busts and crucifixes.

Simon Troger, of Nuremberg († 1769). This artist used a brown wood for his draperies and accessories. There are some fine specimens of his workmanship in the United Museum of Munich, and a capital piece of his, the Sacrifice of Abraham, is preserved in the Green Vaults.

The Bavarian, Krabensberger, imitated the style adopted by Troger. His favourite subjects are gypsies and lazzaroni.

Michel Daebler, at the end of the XVIIIth century, carved groups of children and animals for heads of canes; his compositions are often clever, and always carefully executed.

At the same period, Krueger made little grotesque figures, such as hunchbacks and beggars, with diamond buttons on their garments. The Green Vaults are rich in figures by this artist.

Several artists have carved medallion portraits in ivory. The most celebrated of these are :—

Raimund Falz († 1703), engraver of medals, who worked at Berlin in 1688.

Chevalier, the Chamber of Arts possesses a portrait of Mary II. of England of his workmanship, signed "Cavalier Londini, 1690."

Giovanni Pozzo, engraver of medals at Rome, a portrait by whom may be seen in the same collection, dated 1717.

Many French artists have devoted themselves to carving in ivory, but very few are known. There are some pieces attributed to Girardon, sculptor of Louis XIV.

Moreover, there is every reason for believing that, from the end of the XVIth century, ivory carving was more particularly practised both in France and Italy by Flemish

* Cicognara, *Storia della scultura*, t. iii. p. 152

and German artists settled in these countries. We have seen, that Copé, Fiamingo, François Du Quesnoy, Leonhard Kern, Van Bossiut, Permoser, the most skilful of all,

Fig. 12. Ivory Knife and Sheath of Diane de Poitiers, XVIth century. Collection of Lord Cadogan.

resided for some time in Italy, and that Van Obstal, not less renowned, was a member of the Paris Academy of Sculpture, and as it were, naturalised in France.

We give a glorious specimen of the Italian work of the XVIth century, the knife known by the name of the knife of Diane de Poitiers,* (Fig. 12), although there is nothing to indicate that it belonged to the Duchesse de Valentinois. The handle of the knife is formed by a full-length figure of Mars, with a quiver at his back and a bow in his hand.

* It has been engraved by Willemin, in the *Monuments français inédits*, vol. ii. plate 289, p. 67 of the text. Mr. Dibdin in his Travels in France, mentions this interesting specimen.

Upon the principal front of the sheath the three goddesses, Juno, Pallas, and Venus with Cupid, form a group executed in alto-relief; on the reverse is a female figure seated and holding a mirror; the remainder of the ground is covered with masks and other ornaments in bas-relief. Length, $9\frac{1}{2}$ inches.

Sculpture in wax.

The soft nature of wax was too ready a material for modelling not to be used by sculptors from the most remote times. We know that the Greeks and Romans modelled wax figures.

The ceroplastic art was practised in Italy from the era of the Renaissance. All the celebrated Italian goldsmiths of the XIVth and XVth centuries prepared models in wax of their exquisite compositions, and the great artists made their first attempts upon this material. Luca della Robbia had learned to model in wax from Leonardo, the most skilful goldsmith of Florence. The celebrated Ghiberti, compelled to leave Florence in 1400 on account of the plague, employed himself during his exile in modelling in wax and stucco. Michelozzo, one of Donatello's best pupils, made use with equal success, of clay, marble, and wax; the celebrated Venetian sculptor, Sansovino, had modelled in wax a copy of the group of the Laocoon, considered by Raffaelle as a masterpiece; and so highly esteemed were the waxen statuettes of Tribolo, a pupil of Sansovino, that they served as models to Andrea del Sarto, in a large fresco painting.* A bas-relief, nearly 24 inches high, representing a Descent from the Cross, in the Riche Chapelle † of the Royal Palace at Munich is attributed to Michael Angelo, and the beauty of the work lends support to this opinion. Lastly, the model made by Cellini in wax of his statue of Perseus, preserved in the Gallery at Florence, is very superior to the bronze.

The facility of imparting to wax the colours of nature caused it to be used for portraits. Orsino, under the direction of his master, Andrea Verocchio, executed in wax, of the size of life, a likeness of Lorenzo de' Medici. This kind of portrait became very much in fashion at that period; Orsino made a great number, which are highly extolled by Vasari.‡

* Vasari, Lives of these five artists. † See p. 26, note ‡

‡ Vasari, *Life of Andrea Verocchio.*

In the XVIth century, when medallion portraits became the fashion, many were made of wax; the faces were cut out and applied upon a ground, either of slate, stained glass, or coloured ivory. Alfonso Lombardi of Ferrara, the most famous artist in this style, executed portraits of the most celebrated persons of his time. He was at Cologne at the coronation of Charles V. His medallions brought him into fashion, and all the nobles in the suite of the emperor desired to have their portraits taken by him.* Towards the last fifteen or twenty years of the XVIth century, so great was the rage for these medallions, that even amateurs devoted themselves to the work. "It would take me too long," says Vasari,† "to enumerate all those who model medallions in wax; for now ‡ there is not a single goldsmith that does not make them, and even gentlemen, such as Gian Battista Sozzini at Sienna, and Rosso de' Giugni at Florence, have applied themselves to the art."

The medallion portraits in wax of Lombardi having reached Germany precisely at the moment that the artists of Nuremberg and Augsburg had brought their medallion portraits in wood and speckstein to the highest degree of perfection, they, many of them, hastened to imitate the Italian Lombardi, and made use of wax, which they found more easy to manipulate than even wood and soft stone.

The museums of Germany contain a large number of wax portraits, the work of German artists; the finest represent persons of the second half of the XVIth century. We have particularly observed at the Chamber of Arts at Berlin, those of Sigismund II., king of Poland († 1572), of George II. of Liegnitz († 1577), of the Elector John George of Brandenburg, and of his wife, Elizabeth, in 1579. The collection of M. Hertel, of Nuremberg, is very rich in portraits of this kind, the finest are attributed to Lorenz Strauch, an artist of that city. We have also seen in the cabinet of M. Forster, in the same city, a fine portrait of the Emperor Rodolph II., signed Wenceslas Maller.

Although so many portraits were made in wax in the

* Vasari, *Life of Lombardi.*

† *Life of Valerio de Vicentino* and other engravers in fine stones.

‡ Vasari had finished his work towards the middle of the XVIth century.

XVIth century, but few have been handed down to us, in consequence of the fragility of the material.

Wax portraits were still made in the XVIIth century and the beginning of the XVIIIth. C. Rapp, Chevalier, whom we have already noticed for his medallions in ivory, and Weihenmeyer, have left their names upon some works. We find, in the museum of Gotha, some very good portraits of small size, mostly in alto-relief; the dresses, which denote the beginning of the XVIIIth century, are in the textures of the time. On one of the best we have read the name of the artist, Braunin.

Wax was used both in Italy and Germany at the end of the XVIIth century and the beginning of the XVIIIth, for executing in alto-relief subjects, which, though not of an elevated style, are remarkable for the expression of the figures.

§ III. SCULPTURE IN METAL—NUMISMATICS.

The casting and chasing of metals forms a very interesting branch of sculpture. We will for the present confine ourselves to the working of bronze and iron, leaving that of gold and silver till we come to treat of the goldsmith's art, to which it properly belongs.

Casting and chasing of metals in the middle ages.

The casting and chasing of bronze were successfully practised in the middle ages. The Liber Pontificalis of Anastasius Bibliothecarius makes mention of a large quantity of bronzes, in the enumeration of the gifts made to the churches in the reign of Constantine, and under the pontificate of St. Sylvester. In the following centuries, works of gold and silver appear almost solely among these presents.*

It would seem as if Italy in the XIth century had nearly lost the art of casting in bronze, and of working in bas-relief, since Hildebrand, under Alexander II. († 1073), ordered the gates of San Paolo fuori-le-mura to be made at Constantinople, where the ancient method of working had still been preserved by tradition. Nevertheless, at the same period, works in bronze were executed in Germany, such as the gates of the Cathedral at Augsburg, and the tomb of

* On this point the estimate made of them by d'Agincourt may be consulted. *Hist de l'art.*, t. ii. p. 98.

Rodolph the Swabian in the Church of Merseburg. These works bear, it is true, more or less a certain Byzantine stamp,* which may possibly authorise the conclusion, that the art of melting and chasing bronze was imported into Germany by those Byzantine artists whom the emperor, Henry II., invited to his court at the beginning of the XIth century.

By the end of the XIIth century, the art of casting bronze had re-appeared in Italy, and began to be successfully practised there. The gates made by order of Celestine, which adorn the eastern chapel of St. John Lateran, are the work of

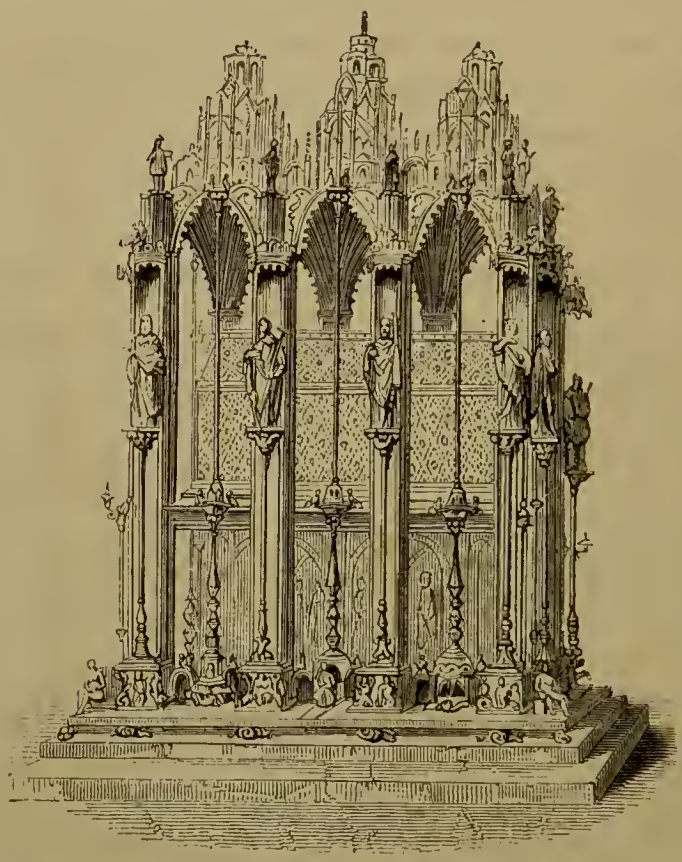


Fig. 13. Shrine of St. Sebald, by Vischer. XVIth century. Nuremberg.

two Italians, Pietro and Uberto of Piacenza, whose names have been preserved to us in an inscription. Bonnano of Pisa, the forerunner of Nicholas, was employed about the same time in casting those of the Duomo of Pisa, and of San Martino at Lucca. In the XIVth century, the technical processes of casting and chasing in bronze were brought by Andrew of Pisa to the highest degree of perfection, and treading in the steps of this great artist, the Italian

* Kugler, *Handbuch der Kunstgeschichte*, S. 488.

sculptors, his pupils and successors, devoted themselves to this fine branch of statuary, which followed all the phases of art, until its entire restoration in the XVth century.

The bronze gates made by order of Suger for the Church of St. Denis, in the XIIth century; the magnificent tombs of Everard de Fouilloy († 1223), and of Geoffroy d'Eu († 1237), bishops of Amiens, and that of John, son of St. Louis, which are of the XIIIth, suffice to establish the fact that the art of casting bronze was known in France in the XIIth and XIIIth centuries.

Germany still possesses a considerable number of funereal monuments in bronze of the XIVth and XVth centuries. Peter Vischer, the most famous of the German sculptors, who, at the beginning of the XVIth century, first introduced into his own country the Italian style of the Renaissance, had before executed very fine tombs of bronze, stamped with the Germanic style of the middle ages.* (Fig. 13.)

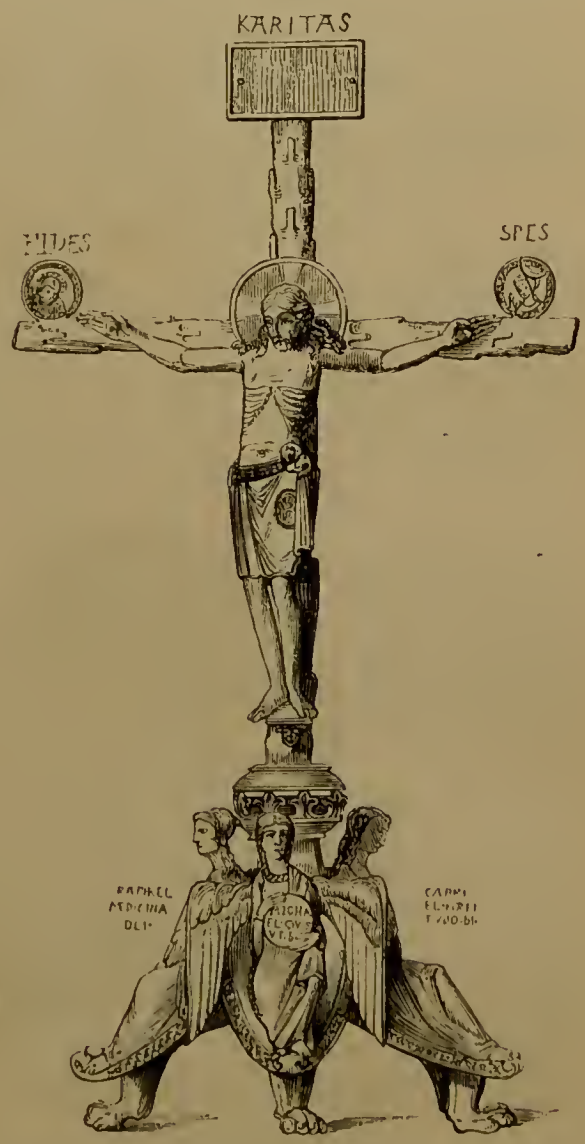


Fig. 14. Bronze Crucifix. XIIth century. Coll. Soltykoff.

The large works of monumental sculpture do not belong to the branch of art of which we are now treating; we here only wish to remind the reader that the art of casting and chasing in bronze had been cultivated in Italy, Germany, and France, during the whole artistic period of the middle ages, and to draw the inference that, from the XIth to the XVth century, a number of ecclesiastical and domestic utensils had been certainly cast in

* Kugler, *Handbuch der Kuntsgeschichte*, S. 777.

bronze. Yet few specimens of these remote ages have reached us. The works in gold, silver, and enamelled copper, are much more numerous than those which belong to sculpture in bronze. It may be supposed that the meanness of the material occasioned their complete disuse, when the riches of the clergy and the luxury of the great, in the XIVth century, caused gold and silver, or at least copper-gilt and enamel, to be employed almost exclusively for ecclesiastical vessels, and for vases and utensils intended for the use of princes.

The woodcut (Fig. 14) represents a curious specimen of German sculpture in metal of the end of the XIIth century or the beginning of the XIIIth, a copper crucifix, cast, chased and gilt, which served as a reliquary, to contain probably a fragment of the true cross.

German tumulary medallions of the XVth and XVIth centuries.

In the middle ages, there were but a few artists capable of executing the great tumulary slabs upon which were represented the figures of the deceased; and besides, the very high price of the semonuments precluded their being used except for the tombs of the nobility. But when, in the XVth century, a taste for the arts

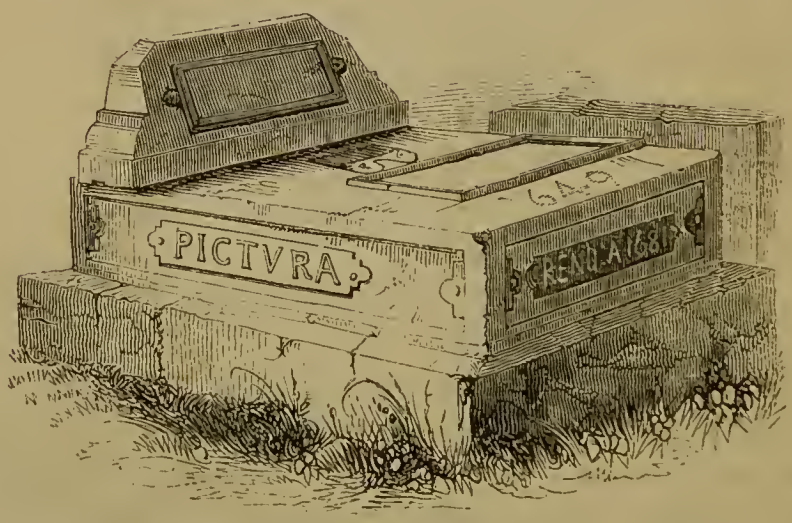


Fig. 15. Tomb of Albert Durer. XVIth century. Nuremberg.

had diffused itself over Germany, and the number of talented artists had very greatly increased, it became the custom among private persons of wealth to place upon the tombs of their relatives circular medallions, cast and chased in bronze, having generally for subjects the escutcheon of the deceased,

supported sometimes by angels, children, or animals, these bas-reliefs being cut out and perforated, and laid upon the stone slab.

It was principally at Nuremberg that this kind of monument was executed from the middle of the XVth century to beyond the XVIIth, of which the old cemetery of St. John in this town, where Albert Durer is buried, affords abundant testimony.* (Fig. 15.) It contains a large number of tombs enriched with medallions, cut out in such a manner as to form a relief upon the stone; several of these are of a very elevated style of composition, uniting great purity of design with workmanship of exquisite delicacy.

Florentine bronzes of the XVIth century.

In the XVIth century, the Florentine sculptors made a large quantity of small bronzes, statuettes, or bas-reliefs, copied mostly from the antique or from the master-pieces of contemporary artists. Some of these pieces have even been executed by the great masters of that period.

Medallion portraits in metal. Numismatics.

The casting and chasing of metals was too well adapted to the representation of medallion portraits, not to have been applied to this use from the revival of the art in Italy. The greatest artists of the XVth century devoted themselves to this kind of work; and in the XVIth century it had reached such high perfection, that Michael Angelo, when looking at the medal of Pope Paul III., executed by Alessandro Cesari, exclaimed that the death-knell of art had been struck, for that nothing surpassing this could ever be produced.†

The Germans who, in the first half of the XVIth century, excelled, as we have seen, in medallion portraits upon wood and speckstein, devoted themselves equally to the casting and chasing of metals for the representation of portraits. The most distinguished artists of this period were Hieronymus Magdeburger and the goldsmith Heinrich Reitz of Leipsic. (Fig. 16.) In the second half of the XVIth century, among the most

* The tomb of this great artist, overlaid with a simple medallion of bronze, bears his well-known monogram, and above, this inscription: "*Quidquid Alberti Durcri mortale fuit, sub hoc conditur tumulo. Emigravit* viii. *idus Aprilis,* M.D. XXVIII.; the sentiment of which has been thus rendered by Longfellow—

"*Emigravit* is the inscription on the tombstone where he lies,
Dead he is not,—but departed—for the artist never dies."

† Vasari, *Life of Valerio Vicentino,* and other engravers.

celebrated are Matthias Karl and Valentine Maler, at Nuremberg; Constantine Müller, at Ausburg; and Jacob Gladchals

Fig. 16. Medal of the Emperor Charles V. Executed by H. Reitz, of Leipsic, 1537.

at Berlin. At the beginning of the XVIIth century, Hans Pezold († 1633), who worked at Nuremberg. In the Chamber of Arts at Berlin is a fine portrait of Albert Durer, by this artist.

The Flemings also made medallion portraits in metal. Among the best artists of the middle of the XVIth century, may be cited Paulus Van Vianen, Steven Van Holland, and Conrad Bloc.

In France, at the end of the XVIth and the beginning of the XVIIth century, Dupré enjoyed a well-merited reputation.

Chasing in iron—German.

Iron, notwithstanding its hardness, has not escaped the chisel of the sculptor. It was principally in Germany, in the second half of the XVIth century that this branch of art was cultivated. The town of Augsburg excelled all others. Its artists in this department, who bore the name of *Plattner*, have covered with their fine chasings in alto-relief, a number of handles of swords and daggers; and enriched with bas-reliefs the scabbards of swords, furniture, and domestic utensils; some have even carved detached statuettes in iron. Among the most cele-

brated, we distinguish Thomas Ruker, who made, in 1574, an arm-chair enriched with historical sculpture of great merit. This arm-chair, which was offered to Rodolph II. by the city of Augsburg, is now in England. The most famous artist of

Fig. 17. Sword Handle by Leigeber. XVIIth century. Historical Museum, Dresden.

the XVIIth century was Gottfried Leigeber, born in Silesia; he worked at Nuremberg and died at Berlin in 1683.* He was at first a common armourer, and brought himself into notice by his ingenious compositions, and particularly by his very delicate finish. In the Chamber of Arts at Berlin, and

* Kugler, *Handbuch der Kunstgeschichte*, S. 797.

the Historical Museum at Dresden, may be seen sword-handles (Fig. 17) of his, the workmanship of which is wonderfully elaborate; he also made a large number of bas-reliefs in iron. The most esteemed of this artist's works in Germany are equestrian statues of rather large size, cut in blocks of iron. In the Green Vaults at Dresden is an equestrian statue, executed by him, of Charles II. of England, represented under the figure of St. George slaying the Dragon (Fig. 18);

Fig. 18. Charles II. as St. George. By Leigeber. XVIIth century. Chamber of Arts, Berlin.

in the Chamber of Arts at Berlin, the statuette of Frederick William the Great as Bellerophon, mounted upon Pegasus and conquering the Chimæra. Taking only into consideration the difficulty to be overcome, these are certainly the chief works of Leigeber, but his little bas-reliefs, and more especially his sword-handles, are of a very superior workmanship.

Large works in iron were made in France in the XVIth century; among others, the fine gates of the Gallery of Apollo in the Louvre, but although enriched with masks and figures, these pieces belong rather to the lock-smith's art than to sculpture.

Along with the works cast in a mould, or sculptured out of the block of metal, are others which have been obtained by a different process, consisting in throwing or beating out with a hammer sheets of metal, so as to give them the form the artist wishes to produce, and to express upon their surface figures or ornaments in relief.

Hammerwork, travail au repoussé, or sphyrelaton.

This process, which has received from the learned the name of *sphyrelaton*, and to which is more commonly applied the

Fig. 19. Metal powder-flask, in repoussé and appliqué work. End of XVIth century.

term of hammer or "*repoussé*," work, may be traced to a period of remote antiquity. The metallic objects which Homer describes are always worked with the hammer, and doubtless, the colossal statues of the ancients were made in this manner. Whatever degree of lightness may be attained for cast-metal by means of the perfection of the mould, it can never be compared with that of a sheet of metal reduced by the hammer to the utmost thinness of which its malleability would admit.

The repoussé process, therefore (Fig. 19), was principally

used in the making of ornamental armour, and likewise in the goldsmith's art which, up to the XVIIth century, comprised the execution of bas-reliefs and statues of gold and silver; in tilting armour, the object being to combine richness with lightness, and in the works of the goldsmith to produce pieces of large dimensions of the least possible weight, there could nothing better have been devised for their purpose than repoussé-work.

During the whole of the middle ages, bas-reliefs, statues, and vessels of gold and silver, were almost all worked in repoussé and afterwards chased; so we are informed by the monk Theophilus, who lived in the XIIth century, in his "Essay upon various arts," * and we know by Benvenuto Cellini's

* The monk Theophilus wrote a treatise generally known under the title of *Diversarum artium schedula*, in which he describes the processes of the various arts cultivated in the Middle Ages. The interest attached to such a work may be easily conceived, at the present time, when attention is more than ever directed to this curious epoch.

Six MSS. only of this work are extant; it was therefore only known to a few of the learned, and had been only incompletely published in the last century, in Germany, by Lessing, and in London by Raspe, when, the Comte de l' Escalopier, after having carefully collated the variations of all the existing MSS., published in 1843, as complete an edition as could be given, with the translation on the opposite page of the text.

It was impossible, without a profound study and a practical knowledge of all the arts treated upon by Theophilus, to make a faultless translation of the Diversarum artium schedula, but, although we cannot admit certain parts of the interpretation given by M. de l' Escalopier of the text of Theophilus, yet he has rendered an essential service to archaeological science, by his publication and translation of this curious treatise. The publication of the text alone was an important work, which calls forth the highest praise. Theophilus has also been translated into English by Mr. Robert Hendrie; London, 1847.

It would be very necessary to have the exact epoch at which the treatise of Theophilus was written, but, the work itself affords no information whatever of a positive date, and the learned have very variously solved this important question. As we shall have frequent occasion to quote the Diversarum artium schedula, we have thought it necessary to examine the different opinions on the subject.

We find extracts from this treatise given in a compilation of the first years of the XIVth century, the *Lumen animæ*; it cannot therefore have been written later than the end of the XIIIth; all the critics agree upon this point, but a diversity of opinion exists upon the anterior period of its publication. Lessing, attracted by the philological affinity between the proper names of Theophilus and Tutilo, has attributed the Diversarum artium schedula to a monk of the convent of St. Gall, called *Tutilo*, who lived in the IXth century, but without adducing any evidence in support of so early a date; Raspe, Morelli, Langi, Émeric David, and MM. de Montabert, Léclanché and Batissier, date the work from the Xth or XIth century; but none of these authors have given their grounds for this opinion, considering the question as settled and beyond a doubt. M. J. Marie Guichard, in the introduction which precedes M. de l' Escalopier's translation, expresses a different opinion. After having discussed the opinions enunciated before him, and after having examined the text, he has come to the conclusion that the publication of a treatise from which the painter, the glass-maker, the worker in mosaic, the miniature-painter, the chaser and caster in medals, the calligraphist, the maker of organs, the goldsmith and

treatise upon the goldsmith's art, that this process was alone in use among the goldsmiths of his time in France and Italy; that he himself employed no other in the making of jewels, vases, and small figures of gold and silver; that it was only the handles of vases, the beaks of ewers, and other pieces which are made separately that he executed by the process of casting.

jeweller derived their instructions, could not have been an isolated fact, unconnected with the progress of the arts, but could only have taken place in an age of general revival and renaissance; that such was the character of the XIIth and XIIIth centuries, and that to this period therefore should the work of Theophilus be referred. M. Guichard adds that in comparing the text of Theophilus with the works of artists of the XIIth and XIIIth centuries, we soon perceive a perfect conformity between the doctrine of the master and the productions of the pupils.

The Abbé Texier, in his *Histoire de l'orfévrerie du moyen âge*, has treated the question. Examining the book of Theophilus in what concerns painting upon glass, the learned archaeologist considers that this artist-monk, was acquainted with all the artistic processes of the glass-makers of the first half of the XIIIth century, and that he must have been their contemporary. As Lessing, by fixing at the IXth century the publication of the treatise of Theophilus, has gone too far back, may we not on the other hand be assigning too modern a date in selecting the middle of the XIIIth century? In fact, we often recognise in certain processes of Theophilus, a *naïveté* which does not show a very advanced practice. For painting in glass, he knows of but one enamel, and he does not appear to have been acquainted with red glass lined with a stratum of white glass, which nevertheless began to be in use in the XIIIth century. (*Peinture sur verre*, by M. Bontemps, p. 27.) When he wishes to imitate precious stones upon the crosses, nimbi, books, borders of vestments, everything that he renders by a clear yellow glass to imitate gold, he employs little fragments of coloured glass, either blue or green, which he fixes upon the yellow glass, with enamel colour rather thick, the firing causing these fragments to adhere to the yellow glass ground.

On the other hand, in support of the opinion that Theophilus wrote in the XIIIth century, writers have thought they found an allusion to Gothic windows in the *fenestra producta* of which he speaks, chapter 59 of the third book, (Chap. 60. of Mr. Hendrie's translation) in teaching the making of a censer by the repoussé process. But if we attend to the circumstances under which Theophilus enjoins these two *fenestra producta* to be made upon the censer, it will be seen they should be placed between little columns, three of which stand at the angles of square towers, and must therefore be close over against the other, admitting only in their intercolumniation of long narrow windows. These words *fenestra producta* can therefore express nothing else, and can have no relation to the finish of the top of the arches. Besides, in Chap. 60., (61 of Mr. Hendrie's translation) we find something more positive, when treating of the making of the east censer. Theophilus requires that the top of the censer should represent several stages of towers, and in the highest of these he desires that long, rounded windows shall be made; *in superiori vero turri, quæ gracilior erit, facies fenestras longas et rotundas.* Here there is no ambiguity, and these are windows with semicircular arches that the monk requires to be used; this brings us back to the XIIth century.

An argument may be deduced from the Diversarum artium schedula, contrary to the opinion that Theophilus lived in the XIIIth century. In his preface, among the people of the West, he cites the Germans alone for their skilfulness in working in metals. In fact, in the XIth century, the Germans were the only people of Western Europe, in possession of the art of casting in bronze. At this period, they had produced the gates of the Cathedral of Augsburg and the tomb of Rodolph of Swabia. In the second quarter of the XIIth century, on the contrary, Suger had caused gates of bronze to be cast (*Lib. de rebus in adm. sua gestis*, § 27), and at the end of this century, the Italians had equalled, if not surpassed, the Germans. Bonano, in 1180, cast the gates of the Duomo of Pisa, and shortly afterwards, those of San Martino of

All works in repoussé were finished with the chisel.

The woodcut (Fig. 20) represents a Spanish breast-plate thus executed. It is damascened with gold and silver.

Fig. 20. Spanish Breast-plate. XVIth century. Coll. Bernal.

Bas-reliefs of copper were also executed by the repoussé

Lucca; in 1198, Pietro and Uberti had executed those of St. John Lateran. These works would have been well known among the artists, and if Theophilus had lived in the XIIIth century, he would not have ascribed to the Arabs and Germans alone the art of casting and working in metal.

Among the arguments drawn from the book of Theophilus to prove that he wrote prior to the XIIIth century, it has been said, that although this author had informed himself from each nation of the different arts in which it excelled, he has made no mention of the enamels of Limoges, so much in fashion in the XIIIth century. M. Texier has answered that we might save the credit of the Limousins by supposing a gap in the MS. This does not destroy the objection which appears to us serious. True, several portions of the MS. have been lost, as the preface of Theophilus proves; he announces that he will treat of the processes employed by the Italians in the carving of ivory, and yet, the book of Theophilus, such as it has come down to us, does not speak of this branch of the art. But, likewise in this preface, which shortly

process, principally for the decoration of altar-fronts and reliquaries.

Sphyrelaton was also used in the XVIth century for obtaining figures and ornaments in relief upon plates of iron, which were afterwards damascened with gold and silver. These fine bas-reliefs of iron, enriched with gold, served to ornament caskets, cabinets, and other valuable pieces of furniture.

§ IV. GLYPTICS.

We may trace to the highest antiquity the art of engraving figures upon hard stones, both incised (intaglios), and in relief (cameos). The Egyptians are supposed first to have cultivated glyptics, and they transmitted the art to the Greeks, who sculptured intaglios and cameos with a perfection that has been rarely attained by artists of modern times. By the Greeks the art was carried to Rome, where the taste for engraved gems continued for several centuries. Some Roman artists practised gem-sculpture with success, but they never arrived at the perfection of the Greeks.

In the first ages of Christianity the art of engraving figures on precious stones continued to be practised in Italy, and particularly at Constantinople. The subject of the cameos

recapitulates all the subjects of which the author is to treat, we see no mention of the art of making *champlevé* enamels. Yet Theophilus treats of *cloisonné* enamels, in the making of which, according to him, the Tuscans excelled. Now, if he had written in the XIIIth century, would he have omitted to mention enamels which were made in France by another process, and which were so highly esteemed at that period, that they were sought after throughout all Europe, and were met with even in the interior of Italy? The "cloisonné" enamels, of which Theophilus alone speaks, were in great favour in the XIIth century; but in the XIIIth, on the contrary, were no longer in use.

Yet the French have not been forgotten by Theophilus; though he does not speak of them as enamellers, he mentions their skilfulness in the manufacture of painted glass; now it is in the second quarter of the XIIth century that Suger († 1152) restored in France, the art of painting upon glass; the finest painted glass remaining of the XIIth century, is that executed by order of the celebrated Abbé for his church of St. Denis. There is no doubt that the reputation of the French in this kind of work, was due to the impulse given to the art by Suger, and the magnificent works he caused to be executed, and which will have given rise to the eulogiums of the monk-artist. In the XIIIth century, painted glass windows were made in Germany and Flanders; the French were no longer the only skilful artists in this style.

We think, therefore, that Theophilus cannot have lived at a period distant from that of Suger; that he was his contemporary perhaps; and that we may, without fear of being deceived, suppose him to have written about the middle of the XIIth century.

was frequently taken from the Old and New Testament.*

Engraving upon fine stones of the middle ages.

After the invasion of the barbarians, the Byzantines, who had preserved the traditions of ancient art, still maintained their taste for gem-sculpture, the only art which appeared to engage their attention; but in the XIth century it had completely declined, even at Constantinople.†

Other nations were acquainted with hardly any other engraved stones than those transmitted by the ancients. Pepin sealed with an Indian Bacchus, Charlemagne with a Serapis,‡ and there is ground for supposing that during the middle ages until the beginning of the XVth century, the art of engraving upon stones had entirely fallen into oblivion among the people of the West. Of this we have to a certain point a proof in the inventories of the kings and princes of the XIVth century, from which we often derive valuable information respecting mediæval art.

Fig. 21. Ancient cameo mounted in the time of Charles V. XIVth century. Cabinet of Medals, Imp. Lib. Paris.

Thus, in the inventory of Charles V. in 1379,§ we often find mention of cameos used in the decoration of metal-work; but the subjects engraved upon them hardly ever relate to the Christian religion, as, according to the custom of the time, would undoubtedly have been the case, had the engraving of those stones been contemporaneous with the pieces they decorated. At fol. 66 of this inventory, we find an enumeration of the seals of the king, and the one which he generally used is described as:—"Le signet du roy, qui est de la teste d'un roy sans barbe et est d'un fin rubis d' Orient; c'est celui de quoi le roy seelle les lettres qu'il

* D'Agincourt, t. ii. p. 96.
† Ibid.
‡ Millin, *Dict. des beaux-arts*, t. i. p. 714.
§ MS. Bibl. roy., no. 8356.

escript de sa main." Lower down, fol. 78, are described—"les anneaulx à camahieux * estant en un autre coffre dont le roy porte la clef: ung camahieu où il y a ung lyon couchant, assis (set) en une verge d'or néellée.—Ung autre camahieu à une teste de femme, assis en une verge d'or toute plaine.—Ung autre petit camahieu d'un enffant à elles (ailes) acropy." From this description it is impossible not to recognise ancient gems, the last would appear to refer to the figure of a Cupid.

At fol. 63 of the same inventory, we find a cameo, representing a Christian subject; it is thus designated:—"Annel des vendredis, lequel est néellé et y est la croix double noire de chacun costé, où il y a ung crucifix d'un camayeux, saint Jean et Notre-Dame et deux angeloz sur les bras de la croix, et le porte le roy continuellement les vendredis." This cameo was no doubt of the Byzantine school. The rings of Charles V., and particularly his signets, would have all been engraved with Scripture subjects or his own effigy, if he had had artists at hand who were practised in gem-sculpture. (Fig. 21.)

We know besides of a considerable number of shrines and ecclesiastical utensils of different epochs of the middle ages which are enriched with antique cameos. Would they have been so employed in times of such austere piety, had there been any means of replacing them by other gems?

The inventory of Charles VI., made twenty years later than that of Charles V., also certifies to the existence of many cameos with profane subjects.†

It has been already mentioned that cameos in the XIVth century were styled *camaïeu*. This name was perpetuated during the whole of the XVIth century; we find it in all the inventories of the time,‡ and it is from this that the name of camaïeu § has been given to monochromatic paintings, and to

* According to Ducange, we find it written in different manners, *camæus, camahutus, camahatus, camaholus,* and *camaheu.* This last is in the inventory of the Sainte Chapelle, 1376. According to Gaffarel, they also said *gamahè.* Lessing cites after ancient mineralogists, *camehuja, gemohuida, gemmahuija.*

† MS. Bibl. roy., *fonds Mort.*, no. 76.

‡ *Not. dans l'invent. de Henri.* II., *de* 1560. MS. Bibl. roy., no. 9501.

§ Camaïeu, in its primitive acceptation, implies an imitation made by means of a single colour varied solely by the effects of chiaroscuro; what the Greeks call monochromatic. Next was comprised under this denomination, paintings in two or three colours, the sole aim of which was to imitate the natural colours of the object; thus we say blue, green, &c., camaïeu. Camaïeu painted in gray is called *grisaille,* in yellow,

those of two or three colours in which there has been no attempt to imitate the natural colour.

Engraving upon fine stones of the XVth and XVIth centuries.

The glyptic art reappeared in Italy in the XVth century, but, according to Vasari, it was not until under Popes Martin V. († 1447), and Paul II. († 1464), that its productions were of any merit. The invasion of the Eastern Empire by the Turks, and the taking of Constantinople, may be considered as the principal causes of the revival of this art. These events having forced the Greek artists to take refuge in Italy, the engravers of gems, although they were now nothing more than coarse, ignorant workmen, carried with them the mechanical processes of their profession, and that was sufficient. From the moment that these processes became known, the glyptic art, encouraged by the great masters who at that time rendered Italy illustrious, recovered itself from the state of debasement into which it had sunk. Lorenzo de' Medici, and his son, Piero, were both passionate admirers of ancient gems, they formed a considerable collection, and invited to Florence the best artists of the day.

In this school was nurtured Giovanni, surnamed *delle Corniole* (of cornelians). He must be considered as the first restorer of glyptics, but he soon had a rival in the Milanese Domenico, who received the name of *de' Cammei* (of the cameos). By the side of these artists may be named Michelino, the painter Francesco Francia, and Caradosso, the skilful goldsmith of Milan.

The XVIth century is the most flourishing epoch of the art. It would take too long to enumerate all those who have rendered it illustrious; but Giovanni Bernardi of Castel-Bolognese, Valerio Vicentino, Matteo dal Nassaro of Verona, Alessandro Cesari, Jacopo Caraglio of Verona, and Luigi Anichini of Ferrara, may be named as the most celebrated.*

Matteo dal Nassaro accompanied Cellini to France in the suite of Francis I., and carried with him into that country

cirage. All engravings and drawings made in red or black chalk, in sepia are camïeu; paintings in black or white, *chiaroscuro*, may also be classed under this head.

* Shells were first used for cameos by the Italian gem-engravers of the Renaissance. Some fine specimens by Nassaro and Coldoré, are still preserved, but the material was found too friable to be much employed by the great artists.

a taste for gem-engraving. Julien de Fontenay, generally called Coldoré, was the first Frenchman who distinguished himself in this art; he flourished at the end of the XVIth century. (Fig. 22.)

Fig. 22. Sardonyx ring with cameo head of Queen Elizabeth, in the possession of Rev. Lord John Thynne.*

The art of engraving upon stones declined greatly in the XVIIth century, and was even so little cultivated, that many of its processes were lost. With the XVIIIth century appeared many artists of high merit. Joseph Pichler († 1790), was the most celebrated of all, and his productions may deservedly be ranked with those of the engravers of antiquity.

But we must not enlarge further upon glyptics, which is only indirectly connected with objects of domestic life. Glyptography requires such general knowledge, and such profound study, as to render it sufficient of itself to occupy the whole leisure of an amateur, and indeed a complete series of engraved stones would absorb all his resources.

* This is said to be the identical ring given by Queen Elizabeth to Essex, and so fatally retained by Lady Nottingham. It has descended from Lady Frances Devereux, Essex's daughter, in unbroken succession from mother and daughter to the present possessor. The ring is gold, the sides engraved, and the inside of blue enamel: the execution of the head of Elizabeth is of a high order, and whether this be *the* ring or not, it is valuable as a work of art.—*Lives of the Earls of Essex.*

CHAPTER II.

PAINTING AND CALLIGRAPHY.

§ I. GENERAL OBSERVATIONS.

Painting was cultivated during the whole course of the middle ages. At Constantinople, under Justinian, and, after the termination of the iconoclastic war under Basil the Macedonian and his successors, the churches were enriched with the most brilliant paintings and mosaics. In France, Childebert I. caused the walls of Saint-Germain des Prés to be covered with paintings; Charlemagne passed a law requiring that the whole surface of churches should be painted. In Italy, Adrian I. and Leo III. followed in the movement given by that great man. Although, in the XIth century, two opposite causes—pomp which multiplied the tapestried hangings and draperies, and the spirit of reform which rejected every kind of decoration—interposed to repress the impulse given to mural painting, yet Suger, in the XIIth century, restored the taste in France by the paintings with which he embellished the interior of the basilica of St. Denis, while, in Italy, Calixtus II. († 1124) at nearly the same period, adorned with paintings the oratory and the audience chamber he had built at St. John Lateran.

Painting applied in the middle ages to the decoration of furniture.

Painting, which was thus extensively employed in the decoration of architectural works, was likewise applied in the West to the ornamentation of furniture and domestic utensils. Theophilus, that monk of the XIIth century, who, in his Diversarum artium schedula, has left us such valuable information upon the industrial arts of his time, affords us evidence of this in the 22nd and following chapters of the first book of

his Treatise, in which he teaches the manner of enriching with painted subjects, the saddles of horses (Fig. 23), litters, folding stools (*pliants*),* and seats.

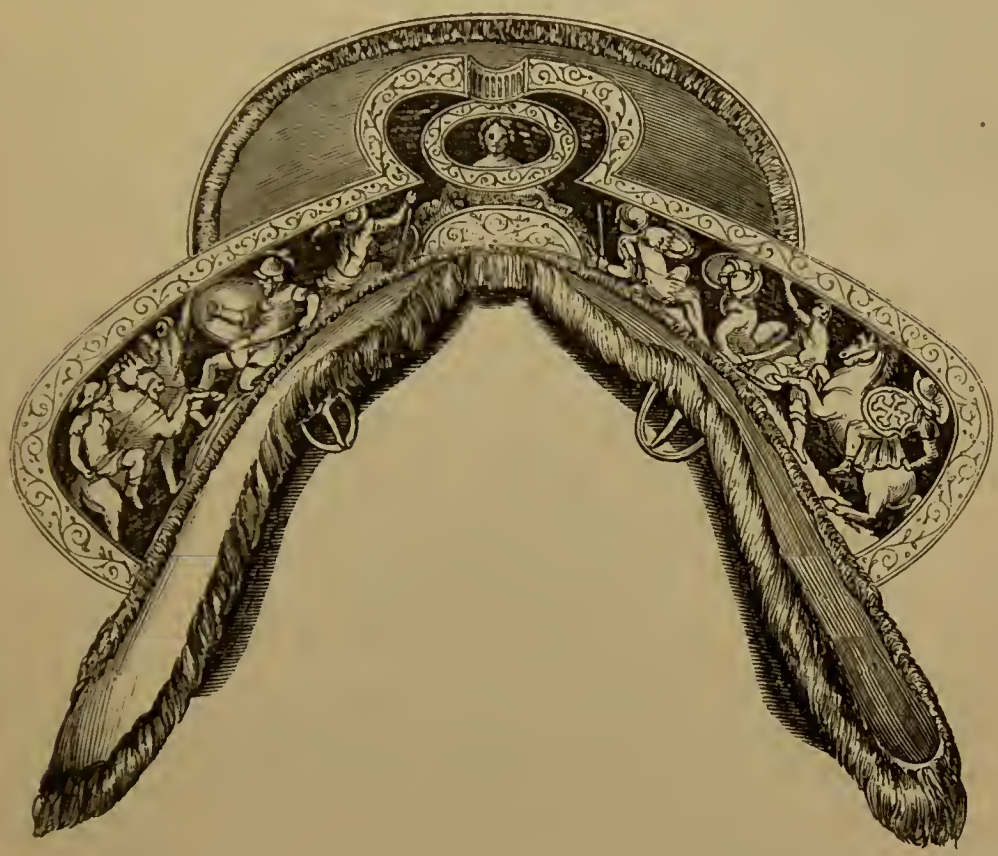


Fig. 23. Painted Tournament Saddle. XVIth century. Royal Armory, Madrid.

During the middle ages were also produced little domestic pictures with sacred subjects, which the pilgrim and the traveller enclosed in diptychs that they might the more conveniently carry them with them on their journeys.

All these pieces of furniture embellished with paintings, have been destroyed by time, and but few even of the portable pictures have escaped its ravages. The mural paintings which decorated the interior of so many churches have been completely annihilated, either through the destruction of the edifices, or through the rage for whitewash, which has left scarcely any vestiges of them in the buildings which are still standing. We should therefore have had no means of forming an idea of mediæval painting, had it not been

* These folding stools (*pliants*) in the form of an X, go back to a very remote period. Some are still preserved in the churches, for the ordination of bishops. There is one at Sens, said to have belonged to St. Loup.

applied to enrich those objects of private life which have been best preserved, viz., manuscripts.

§ II. CALLIGRAPHY.

Books are indeed the most indispensable companions of private life; and books of prayer were for many centuries of the middle ages the sole study of a great number of men; and thus have the scholar and the devotee delighted in all ages to embellish these books, which have formed the charm and solace of their existence.

Ornamentation of the books of the ancients.

The taste for decorating manuscripts existed already among the ancients; Marcus Varro called forth the praises of Cicero for having traced in his books the portraits of more than seven hundred celebrated persons.* Seneca, in his treatise "De tranquillitate animi,"† speaks of books ornamented with figures, and Martial addresses his thanks to Stertinius who had placed his portrait in his library.‡

None of these illustrated works of antiquity have reached us, and the most ancient specimens of calligraphy extant are probably the Terence of the IVth century, and the Virgil of the Vth, in the library of the Vatican.

In the first centuries of the middle ages.

The introduction of the Christian religion opened a wide field for the decoration of books, and Constantine efficiently patronised calligraphy by founding at Constantinople a library, in which the sacred books were deposited. His successors, down to the iconoclastic emperors, continued to encourage the art. If Leo the Isaurian, in the VIIIth century, impelled by his hatred of images, caused a great number of the books collected by Constantine and his successors to be burned, on the other hand, Basil the Macedonian in the IXth century, Leo the philosopher, Constantine Porphyrogenitus in the Xth, and the Empress Eudoxia in the XIth, became the avowed patrons of calligraphic miniatures, and caused some very fine manuscripts to be executed.

In the west, Charlemagne and his grandson, Charles the Bald, encouraged the transcription and embellishment of

* Pliny, lib. xxxv. c. ii. † Cap. ix. ‡ Lib. ix., in *præf. et epigr.* i.

manuscripts. The magnificent evangeliary * of the Library of the Louvre, and the fine bibles of Charles the Bald, preserved at Rome, in the Benedictine Monastery of St. Calixtus, and at Paris in the Imperial Library, attest the warm patronage accorded by these princes to the illustration of manuscripts.

The Xth century was the most disastrous period for the arts in general, and especially for calligraphy: manuscripts of that time are rare, and those which remain exhibit a total decline of painting. Nor do those of the XIth century show much amendment.

In the XIIth and XIIIth centuries.

To date from about 1150, a new and happy impulse began to be felt. Drawing acquired precision, firmness, and a certain truthfulness of expression. Nevertheless, a black stroke marks the outlines, defines the form of the principal details, and limits throughout the various tints of colour. The fanciful ornaments, the grotesque figures which, mixed with foliage (*rinceaux*) † and interlacings (*entrelacs*) ‡ surrounded the initial letters, and often formed the sole decoration of the books of the preceding century, now began to be discontinued; the calligraphic borders are not so broad.

From this period, artists cease to borrow from heathen art; and take nature for their guide. Their ornaments are derived from the vegetable kingdom, and their figures, with the exception of Christ, the Virgin, and the Apostles, are all attired in the costume of the time. Gold is still generally employed in the ground.

Painting continued to progress until the end of the XIIIth century; but the drawing, in which the outlines are too strongly marked, is apt to be hard and stiff. The gold grounds begin to be replaced either by grounds of colour

* Volume containing the Gospels. Sometimes placed upon the altar, sometimes attached upon a desk to support it, in which case it was only ornamented on one side, because the other being fixed could not be seen. In the first centuries, bishops were represented holding an evangeliary, and, conformably to the ancient laws of the Church, they are figured having an evangeliary upon their head, when the artist represented their ordination.

† *Rinceau.* A kind of ornamental branch rising from a stem and decorated with large leaves, flowers (*fleurons*), and buds of either natural or conventional form. —Millin.

‡ *Entrelac.* Ornament composed of fillets (*listels*) and flowers (*fleurons*) tied one with the other.—Millin.

diapered with patterns of gold, or by grounds representing an iridescent mosaic, which has a very pretty effect.

Fig. 24. The Annunciation. Missal of the XIVth century.

In the XIVth century.

Painting, towards the beginning of the XIVth century, exhibited a marked improvement. The pen is no longer in requisition for determining the outline of the drawing, the brush alone is employed; the *motives* * are

* *Motive.* This word, familiar as it is in the technical phraseology of other languages, is not generally adopted into our own. It may often be rendered *intention*, but has a fuller meaning. In its ordinary application, it means the principle of action, attitude and composition in a single figure or group; thus it has been observed, that in some antique gems which are defective in execution, the *motives* are frequently fine. In its more extended signification, the term comprehends invention generally, as distinguished from execution. Another very different and less general sense in which this expression is also used, must not be confounded with the foregoing; thus a *motive*

full of grace, and the execution, although still timid, is always finished. (Fig. 24.) The faces acquire more delicacy and more expression. Painters first substitute for the grounds of gold or marquetry details of interiors, of which the arrangement already shows depth, and soon afterwards, feeling themselves more masters of their art, they attempt linear and aërial perspective, and give landscapes as backgrounds to their compositions. The pages are generally decorated with rich branches, which make the border with their delicate foliage of gold and colour. The initial letters begin to form the frame of little miniature paintings, yet they are more often traced in gold upon a coloured ground, or in colour upon a gold ground, and ornamented by lines disposed in delicate arabesques.

Charles V. and his brothers, the Dukes of Berry and of Burgundy, granted special protection to calligraphic painting in France and Flanders. These princes devoted large sums to the execution of some splendid manuscripts, which have been

Fig. 25. From a Missal of the XVIth century, executed for J. Juvenal des Ursins.

handed down to us, and are to this day memorials of their glory.

is sometimes in the sense of a *suggestion*. It is said, for example, that Poussin formed the motives of his landscape compositions at Tivoli. In this case we have a "suggestion" improved and carried out. Sir C. Eastlake, in Kugler's *Handbook of Painting*.

In the XVth century, we find fresh progress in the art of the miniature painter. (Fig. 25). The painters adopt a free and natural manner; the outlines of the figures are easy and graceful. The choice and disposition of the subjects, the improvement in the forms, the good taste of the ornaments, mark the progress of this art towards perfection. The grounds of gold and marquetry no longer appear, but give place to landscapes, interiors perfectly well-arranged, and with full understanding of perspective; the draperies are marked by a natural arrangement, in harmony with the actions of the persons. The ornaments which surround the pages are of a finished execution; capricious figures are again displayed in the midst of elegant foliage, enriched with fruit and flowers.†

In the XVth century.

Fig. 26. A "Peintre caligrafe," of the XVth century, from MS. in the Imp. Lib. Paris.*

The invention of printing was a fatal blow to calligraphy. Yet the beautiful productions of contemporaneous artists had so awakened a taste for the decoration of manuscripts, that they not only continued to be illuminated, but the printers also sought to decorate their books with pictorial transcripts of calligraphic magnificence. (Fig. 26.)

* The art of miniature painting was divided into two branches; the "Miniatori," miniature painters, or illuminators of books. These furnished the paintings, the borders and arabesques, and they also laid on the gold. The second division were the "Miniatori caligrafi," who wrote the whole of the work and drew the initial letters of blue or red with their fanciful ornaments.

† Confined within the limits of an introduction, we have been able to give but an imperfect sketch of the history of the calligraphic art. On this interesting subject, may be consulted the great work of the Comte Bastard; that of M. Paulin Paris; *Les manuscrits français du Bibliothèque du roi*, and the excellent articles of the Abbé Cahier, in the *Annales de philosophie chrétienne*, t. xix.

At the beginning of the XVIth century, miniature painting was in possession of all the resources of the art, and as if to excite still greater regret for calligraphy, now about to be proscribed by printing and engraving, the manuscripts were so splendidly decorated, and by artists of such distinguished merit, that princes alone could indulge in the luxury of possessing them.

In the XVIth and XVIIth centuries.

Under Louis XIII. and Louis XIV. some books were still decorated with rich illuminations, the last glimmerings of an art which, for some centuries, had shone with so much splendour.

The miniatures of the manuscripts were long considered only as ornaments calculated to increase their value. Montfaucon was the first to recognise their usefulness as historical documents of the manners and customs of our forefathers. Yet few persons after him directed their attention to the subject, until within these last thirty years, when the middle ages, for three centuries so decried, have become the object of study; and with this has arisen the conviction, that much of the domestic and popular history of our ancestors may be learned from their miniatures. The simplicity of the calligraphic artists having led them since the XIth century to copy the objects immediately before their eyes, and to impart to all their compositions, whatever may have been their subjects, a contemporaneous tinge, it is clear that in their little pictures we shall find the costumes, arms, utensils, furniture, and even the customs and ceremonies, both civil and religious, of their epoch. We find in them the portraits of illustrious persons, whose lineaments would have remained unknown to us, had not calligraphers undertaken to pourtray them. In fact, it often happens that the person for whom the miniature manuscript was executed caused his own portrait to be painted; thus the figure of Charles V. in royal costume, forms a frontispiece to the manuscript we have often cited of the inventory of his jewels.

Miniatures and manuscripts serve as documents for history.

To these considerations, which are sufficient of themselves to show that manuscripts should be included among the documents most essential to the study of the private life of ancient times, may be added another, viz., that they have

been the refuge of art for our old painters, and that it is in the existing works of calligraphic miniature that we must seek for the history of the development of art from the Christian era. To possess manuscripts with miniatures of the middle ages, is in fact, to possess a gallery of contemporaneous pictures, the only kind that can be procured.

§ III. PAINTING UPON GLASS.

The church windows of the middle ages which have escaped the numerous causes of destruction, may afford valuable assistance to the history of art at that period; but it is neither in private collections, nor even in public museums, that the study of painted glass can be pursued. Those who are interested in the investigation, should visit those cathedrals in which these large transparent pictures are preserved unblemished, and in which they produce so wonderful an effect. Yet, as in the XVth century, painting upon glass ceased to belong exclusively to churches, and was used in the decoration of the windows of private residences, of public edifices, and even of the mansions of rich citizens, it became to a certain extent connected with the works of private life, and as such comes within the limits of our treatise. We must not therefore omit to notice this art which, almost entirely neglected for more than two centuries, now gives promise through the noble efforts of these last few years, of being ere long restored in all its splendour.

Glass windows of the ancients.

The manufacture of glass is of the highest antiquity; but could the ancients who were so well acquainted with the art of staining glass of various colours, of fashioning it into vases of every kind, of employing it in little cubes in the composition of mosaics,—could they also prepare it in sheets?—at what period was glass first used for windows? These are the first questions that suggest themselves to the authors who have treated on the history of painting upon glass; and, until lately, a few texts of controverted interpretation were the only documents we possessed on the subject.

Those who would trace back the use of glass windows to the first century of the Christian era, derived their arguments

from a passage of Seneca,* and from the narrative left to us by the Jew Philo, of his reception by the Emperor Caligula.† Several philologists maintain, on the other hand, that the words of Seneca and Philo, which are sought to be applied to glass, should be understood of a transparent stone, of a kind of talc,‡ or a translucid shell which the ancients made use of to close their windows. Levieil, a painter upon glass, who has left us a very extensive work upon his art,§ desirous as he is of tracing back the art of painting upon glass as far as possible, admits that he can give no authority from the passages of Seneca and Philo, in consequence of their doubtful interpretation. Nor does Langlois, who has written an essay upon the painting of glass, admit that it was the custom to close windows with glass before the IIIrd century.‖

With respect to this epoch, there can be no uncertainty. Lactantius, a celebrated ecclesiastical writer of the beginning of the IVth century, St. Jerome, in his commentary upon the forty-first chapter of Ezekiel, Prudentius, in his poems, speak of the employment of glass for the closing of windows, in terms which can leave no doubt of its being used at the time in which they wrote.¶

Winckelmann had pronounced in favour of the first opinion, by affirming that he had seen fragments of panes of glass in the window of a house at Herculaneum.** Recent discoveries made since Winckelmann wrote have brought additional support to his opinion. In the excavations at Pompeii have been found fragments of panes of glass and window frames, which are now preserved in the museum of the Studj at Naples.††

The ancients were perfectly acquainted with the art of colouring glass: we shall give by and by the documents which

* "Quædam nostrâ demum prodiisse memoriâ scimus, ut speculariorum usum, perlucente testâ clarum transmittentium lumen." Seneca, epist. 90.

† Philo, *Opera græcæ-latina*, Paris, 1640.

‡ The only example now known to exist of this kind of window is in the Church of San Miniato at Florence, built in the commencement of the XIth century, under the Emperor Henry, and his wife Cunegunda. The windows, five in number, are in the apsis, and are each filled with a single slab, formed of a kind of transparent alabaster, or marble, called by the Italians "fengite." The effect of these windows is singular When illuminated by the morning sun, they appear shining with a cloudy roseate light.—Merrifield. *Ancient practice of painting.*

§ *L'art de la peinture sur verre et de la vitrerie*, folio, 1774, p. 10.

‖ *Essai historique et descriptif sur la peinture sur verre.* Rouen, 1832, p. 5.

¶ Quoted by Levieil, who gives the texts, p. 11.

** *Monum. inédits*, folio 17, t.i. p. 267.

†† Mazier, *Antiq. de Pompéi*, 3e partie, p. 77, 1re partie, p. 54.

establish this fact. There was nothing therefore to prevent them from colouring glass for their windows, as they did for their vases, many of which are of the finest colour; yet the fragments of ancient window glass hitherto discovered are all white.

Use of coloured glass in the windows of churches.

At any rate it is certain that when on the establishment of Christianity, the ancient basilica were converted into Christian temples, the windows of these new churches were adorned with coloured glass. Émeric David, in support of this opinion, which he entertains himself, thus translates two verses of the description left to us by Prudentius, of the Basilica of San-Paolo-fuori le mura, built by Constantine:—"In the rounded windows are displayed panes of glass of various colours; thus do the windows shine when decorated with the flowers of spring."*

If, in order to refer to a later time the use of coloured glass in churches, the fidelity of this translation has been disputed, and the "hyalo insigni varie" of Prudentius interpreted to mean mosaics, the writings of Gregory of Tours leave no doubt of the existence of coloured windows in the VIth century. Fortunatus, Bishop of Poitiers, his contemporary, extols in several passages of his poems the brilliancy of the coloured windows.†

In these brilliant glasses of various colours, there were yet no figure, no ornament painted upon the glass; they were composed of a number of pieces variously coloured, each being throughout of a uniform tinge, and cut out into different patterns and arranged to form designs. These can only be considered as transparent mosaics.

Coloured and painted glass.

In fact, there is a great difference between colouring glass and painting upon it. The coloured glasses are obtained by mixing metallic oxides with glass in a state of fusion, by which means a uniform colour is given to the whole mass. This colouring is not superficial, it pervades the substance of the glass, the colouring matters becoming incorporated by fusion with the vitreous mass. This process produces what is called stained glass.

* "Tum camuros hyali insigni varie cucurrit arcus:
Sic prata vernis floribus renident.
Prudent. Περὶ Στεφάνων. Hymn. xii. v. 53, 54. *Ed Romæ*, 1788, t. i. p. 1199.

† Levieil, work quoted, p. 12.

which must not be confounded with painted glass. To obtain the latter the artist makes use of a plate of translucid glass, either colourless or already tinted in the mass, and gives the design and colouring with vitrifiable colours upon one or both surfaces. These colours, true enamels, are the product of metallic oxides which give the coloration, combined with vitreous compounds known by the name of fluxes. These fluxes serve as vehicles for the colours, and it is through their medium, assisted by the action of a strong heat, that the colouring matters are fixed upon the plate of glass and incorporated with it.

To what period can we trace the art of painting upon glass.

The charm of the brilliant mosaics of the glasses of the first ages of Christianity, very naturally induced the wish to trace upon them figures and subjects; but the question, at what period this art of glass painting with enamel colours was first introduced, has not been less the subject of controversy than that concerning the first use of glass for closing windows.

Anastasius Bibliothecarius, who wrote at the end of the IXth century, and who has, in his Lives of the Popes, delighted in setting forth all the magnificence with which they had decorated their churches, never speaks of windows with painted glass, but only of windows with stained glass. Thus when in the life of Leo III. († 816) he relates that this pontiff caused the church of St. John Lateran to be decorated with coloured glass, it is in terms which do not admit of our supposing the existence of any painting whatever upon the windows employed. "Fenestras de absidâ ex vitro diversis coloribus conclusit."* We must therefore consider it as very nearly established that painting upon glass was unknown in the IXth century; for had it been, the popes, so zealous in the decoration of the churches, would not have failed to welcome with delight this new means of embellishing them, and Anastasius would surely have spoken of so splendid a style of decoration.

The Xth century was a prey to so many calamities, and the arts, almost everywhere deprived of the patronage of the great, had sunk into such a state of degradation, that we

* Anastasius Biblioth., Life of Leo III.

cannot with any probability assign to this period so important a discovery. On this account, Levieil,* Alexander Lenoir,† Langlois,‡ and M. de Caumont,§ have expressed their opinion that painting upon glass was unknown till the XIth century. Émeric David, on the contrary, thinks that the invention of painting upon glass should be referred to the reign of Louis the Debonnair, or to that of Charles the Bald.‖ But, in the note accompanying the passage wherein he announces this opinion, he appears to destroy all the value of his argument, by saying that, "Si l'art de peindre sur verre eût été connu du temps de Charlemagne, les poëtes contemporains n'auraient pas manqué de célébrer une invention si remarquable." But would not the same observation apply to the time of Charles the Bald? Yet what writer of the IXth or even of the Xth century has spoken of painting upon glass? Therefore Émeric David can only support his opinion by a writer of the XIth century. The historian of the monastery of St.-Benignus at Dijon, who wrote about 1052, says Émeric David, asserts that there yet existed in his time, in the church of that monastery, a very ancient glass window representing the martyrdom of St. Paschasia, and that this painting had been taken from the old church restored by Charles the Bald.¶ Without stopping to discuss the interpretation given by Émeric David to the text by which he seeks to support his opinion, may we not say that the monk of St.-Benignus has applied the word painting to a representation expressed by a combination of pieces of stained glasses, and confounded, as is well remarked by Alexander Lenoir, the art of staining glass with that of painting upon it? M. Batissier, who has recently published an excellent history of glass and of painted windows,** coincides with the opinion of Émeric David, founding his views on the Diversarum artium schedula of Theophilus. The learned monk has devoted thirty-one chapters of his book to the art of glass-making

* Levieil, work quoted, p. 20. † *Musée des monuments français.*
‡ Work quoted, p. 9. § *Cours d'antiquités monum.*, t. vi. p. 465.
‖ *Hist de la peinture*, ed. 1842, p. 79.
¶ This is the text of the chronicler: "Postea pro confessione deitatis sententiâ fuit multata capitali; ut quædam vitrea antiquitis facta, et usque ad nostra perdurans tempora, eleganti permonstrabat picturâ." *Chron. S. Benig. Divion*, apud d'Achery, *Spicil.*, t. c. ii. p. 383,ii. * * It is inserted in the *Cabinet de l'amateur*, t. ii.

and to that of painting upon glass, and if the publication of this Treatise had been as early as the IXth, or even the first years of the Xth century, the inference from it would be conclusive, that painting upon glass must have existed in the time of Charles the Bald. Thus in order to make use of so imposing an author as Theophilus, M. Batissier is obliged to admit that the monk wrote at the end of the Xth century, and moreover does not speak of painting upon glass as being a new invention.* But as we have before said,† a more careful study of the book of Theophilus, has led to the general belief that it cannot have been written before the XIIth century. This treatise cannot then be appealed to in favour of the opinion which would place the discovery of painting upon glass at the middle of the IXth century.

Ought we not rather suppose that this admirable invention can only have been produced at a time of revival; at a period when men, recovered from the agitations of the Xth century, and being no longer overpowered by that dread of the approaching end of the world which had paralysed all activity, were vigorously starting into new life; at a period when men of all conditions began to vie with each other in exertions to restore and embellish the ecclesiastical edifices; at a period, in short, when art opened for herself new paths, created a new style, and strove to exhibit to the world organised productions, entirely distinct from those that had hitherto appeared? Moreover, it is a fact, acknowledged by all archaeologists, that we do not know now any painted glass to which can be assigned with certainty an earlier date than that of the XIth century.

Painted windows of the XIIth and XIIIth centuries.

The painted windows of the XIIth, and those of the XIIIth century, have nearly the same character. The general design consisted of little historical medallions of various forms, symmetrically distributed over mosaic grounds comprised of coloured glass borrowed from preceding centuries. This ground is arranged in square or lozenge-shaped panels, filled with quatrefoils, trefoils, and other ornaments; the whole design is surrounded with borders of varied patterns, of scroll-like

* *Cabinet de l'amateur*, t. ii. p. 87.

† See *supra*, p. 48.

foliage, interlacings, palms, and other leaves of different kinds. The subjects of the medallions are taken from the Old or the New Testament, or more often from the legendary history of the saints. The principal outlines of the design, both of the medallions and of the grounds, are formed by the lines of lead used for holding the different pieces of glass together, and which thus formed a black boundary to each subject. The pieces of glass are in general coloured, rarely plain. Upon these pieces of glass, which are always of small size, the folds of the draperies, and the details of the ornaments are portrayed by a reddish or bistre colour laid on with a brush. Some hatches * of this colour form the shading. The flesh tints themselves are not expressed by any application of colour; but a glass lightly tinged with violet forms the ground, and the features are indicated with this same bistre enamel. At the end of the XIIth century the whole subject was drawn in bistre, but giving a more detailed outline; hatches scratched out upon the coloured ground produced a very happy effect of light, so that with one enamel colour only, the painters in glass succeeded in obtaining three different tints.† We soon after find upon some windows the little medallions with subjects replaced by isolated figures of larger size with a background of mosaic.

The chief merit of the windows of the XIIth and XIIIth centuries, and which, notwithstanding their many imperfections, causes them to be esteemed, is their perfect harmony with the general effect of the edifices to which they belong. At whatever distance we examine them, we are struck by the elegance of their form and the brilliancy of their colour. The artist has had no intention of executing an independent work; he has given himself little trouble about a faithful copy of nature; his whole aim has been to contribute, under the direction of the architect, to the ornamentation of the building; and he has never failed of success through the skilful arrangement and harmonious distribution of his colours, which, notwithstanding their brilliancy, shed over the interior of the temple a mysterious light, adding

* Fr. *Hachures.* Close, equal and parallel lines used in engraving and drawing to mark the shadows.

† Theophilus, *Diversarum artium schedula,* lib. ii. cap. xx.

much to the solemn grandeur of the architecture. This harmony of effect did not exclude a richness of detail. The mosaics of the grounds and the borders which surround them are always of graceful patterns of infinite variety and of charming originality. The subjects are characterised by a touching simplicity, neither devoid of life nor movement.

Glass windows according to Theophilus.

Theophilus shows us from the 17th, to the 21st chapters inclusive of his second book, the manner in which the painter upon glass drew his compositions, how he cut the glass, how he painted it.

On a wooden table which had previously been whitened with pulverised chalk and sprinkled with water, the artist first marked with a rule and compass, the exact size of the window or pane of the window to be composed. This done, he sketched out with lead or tin, and afterwards with a red or black colour, the subject to be represented upon the glass, together with the borders and other ornaments with which it was to be decorated, marking out the shadows with hatches, such as afterwards would be expressed by the bistre enamel. He then noted down the colour of each part of the composition, either by colour applied upon the table in the different compartments which formed the design, or by a conventional letter which referred to a given colour. The artist, from these memoranda, then took as many pieces of coloured glass as there were different compartments in the design; and placing these pieces of glass, one after the other, on the spaces they were to fill, he traced upon them with chalk ground in water, the outlines of the design he saw, through the glass, upon the table.

The glass-makers were not then acquainted with the method of cutting glass with the diamond, which did not begin to be used until the XVIth century*. To cut out all

* The application of the diamond to cutting glass was, it is said, suggested by the well-known anecdote of Francis I., who in order to let the Duchess d'Estampes know that he was jealous, wrote the following lines on a pane of glass, which, says Le Vieil (*De la peinture sur verre*, p. 206), may be still seen in the Château Chambord :—

"Souvent femme varie
Mal habil qui s'y fie."

"The effect," he continues, "of the impression of one of the points of this diamond on the glass, caused it to be remarked that the characters were not only engraved on

these pieces of glass, they made use of an iron rod called the dividing iron; this was heated in the fire, and drawn along the lines to be divided, which they took the precaution of slightly moistening if the glass was hard and did not easily divide. All the portions being thus cut out, any remaining asperities were removed by filing them with a kind of iron tool or claw, called riesel iron (*grosarium ferrum*), and the parts made to fit together accurately.

All the pieces of glass thus cut out, were then carried back to the table upon which the design was drawn, and each laid over the place it was to occupy; the painter then proceeded with the bistre enamel colour, of which Theophilus gives the composition in his 19th chapter,* to retrace upon the glass the lines and shadows marked upon the table. Theophilus teaches, moreover, how to degrade † the tones with this single enamel colour, in such a manner as to give the effect of three colours, and he also makes known other resources of the glass painters of his time.

When the enamel painting thus applied upon the tinted glass was dry, the pieces of glass were carried to the furnace to be burned. The burning finished and the glass cooled,

it, but that the glass was actually cut; thus an accident proved that the diamond was adapted for cutting glass, and doubtless gave rise to the practice which soon became general." It is a pity to spoil so good a story by proving the invention to be older, but the truth must be told; and from a Bolognese MS. of the XVth century we learn that the art of cutting glass with a diamond was known and practised in Italy at the period when this MS. was written, that is, more than a century previous to the time of Francis I. The writer of the MS. says, "And also, if you wish to cut glass, or to make small pieces out of large ones, take a fine diamond, and immediately put the glass into water, and it will break directly by tapping the glass dexterously wherever you have touched it with the diamond." Merrifield. *Ancient Practice of Painting*, vol. ii, pp. 333, 494.

* Theophilus thus gives the composition of the enamel used for painting upon glass: "Tolle cuprum tenue percussum, comburens in parvula patella ferrea, donec pulvis omnino sit, et accipe particulas viridis vitri, et saphiri græci, terens singulariter inter duos lapides porfiriticos, et commiscens hæc tria simul, ita ut sit tertia pars pulvis, et tertia viride, tertiaque saphirum, teres pariter super ipsum lapidem cum vino vel urina diligentissime, et mittens in vas ferreum sive plumbeum, pinge vitrum cum omni cautela secundum tractus, qui sunt in tabula." From this test, we see that the enamel of Theophilus is composed, 1st, as colouring matter, of oxide of copper procured from the oxidisation of this metal obtained in a vessel of iron; 2ndly, of two fluxes, the one of glass already coloured by oxide of copper, the other of glass coloured blue (probably by zaffre, the colouring-matter of which is oxide of cobalt). This mixture would only have produced a bluish enamel, but the copper having been calcined in an iron vessel, a certain quantity of this metal is transformed into red oxide, which, mixed with the bluish glass, has furnished this reddish-brown enamel that we remark upon the glass of the XIIth and XIIIth centuries.

† *Degradation.* The diminishing of the tones of colour, lights and shades, according to the different degrees of distance.

the different pieces composing the design were again put together and fastened by strips of lead.

In the XIVth century, the painter upon glass endeavoured to copy nature with fidelity, and sometimes he was successful. He began to seek the effects of chiaroscuro, to introduce lights and shadows into the ornaments and draperies. The flesh tints are no longer expressed by violet-tinted glasses, but painted upon white glass, in a reddish gray colour, and their models approach more nearly to nature. The pieces of glass are larger, the strips of lead are placed at wider intervals, large single figures become more common, occupying an entire window, and at the end of the century we find them of large dimensions; these figures are placed under elaborate canopies, and no longer on a mosaic ground, but one of plain blue or red.

Painted windows of the XIVth century.

The consequence of this progress in the art of design, is seen in the efforts of the glass painter to create an individual work, yet without an absolute neglect of the general effect to be produced. If he did not yet venture upon a design with large figures, subject to the rules of perspective, he gave up the small medallions filled with legendary subjects.

Regarding painted windows in the light only of a monumental decoration, we may say that the glass pictures of the XIVth century produce a less striking effect than the brilliantly coloured mosaics, relieved by historical medallions of the preceding centuries. Yet the architectural ornaments employed in the XIVth century, to form a frame to the figures, are often very favourable to the decoration of the edifice, of which they appear to prolong the extent. Besides, the improvement in the drawing and colouring is an ample compensation for the mysterious effect of the painted glass windows of the XIIIth century, and the end of the XIVth century may be considered as one of the finest epochs in the history of painting upon glass.

All the arts kept nearly equal pace with each other. Painting upon glass followed the progress of painting in oils during the XVth and the first half of the XVIth century. The amendment of the drawing, the costume of the figures, and the style of the composition serve particularly to determine the

Painted windows of the XVth and first half of the XVIth century.

age of the painted windows during these hundred and fifty years. The tendency of the artists on glass to produce individual works, is more and more observable from the beginning of the XVth century. The decorations which like frames surround the figures and subjects, and which always are borrowed from the architecture of the time, are increased from day to day, and present a great complexity of lines and ornaments, which have often a very beautiful effect. During a great part of the XVth century, the legends painted upon the phylacteries explain the subjects, most commonly by a verse of Scripture. The blue, or red hangings, introduced behind the figures, are of damasked stuffs of great richness. (Fig. 27.) Borders are rare, and when found, consist of branches of rather meagre foliage, painted upon long strips of glass. The artists make frequent use of *grisailles*, which admit a great deal of light into the edifices, and produce none of those fine effects of the coloured mosaics of the XIIth and XIIIth centuries.

Fig. 27. St. Anthony. German painted glass. XVth century. Coll. Soltykoff.

In the second half of the XVth century, buildings and landscapes in perspective were first introduced. In the XVIth, artists showed great skill in producing graceful compositions, depth of background, trees, fruits, and flowers. Subjects taken from the lives of the saints are abundant, with scenes from the Gospel, while figures of apostles, prelates, and abbots prevail in the composition.

As regards the materials and means of execution, these remained, during all this period, much the same as in the preceding centuries, although some improvements on the ancient processes had been introduced. From the XIIIth century, and particularly in the XIVth, use was made of a red glass, coated or cased * with a layer of white, which

* Fr. *Doublé.* A term also applied to precious stones when cemented upon glass

was turned to good account. According as the composition required, certain parts of the red glass, which formed the ground of the draperies, was ground away in such a manner as to uncover the layer of white glass, and in these parts, thus removed, were introduced new layers of glass variously coloured, which imitated fringes, embroidery, and even precious stones, and were fixed by firing under the muffle.* In the XVth century, the cased glasses were made of blue, green, and violet; very beautiful effects were thus produced, and a great variety of tones of colour placed in juxtaposition, without having recourse, as before obliged, to as many pieces of glass as there were colours.

From the first year of the XVth century, much less use was made of glass coloured in the mass, and artists preferred white glass and the use of enamel colours for expressing the lines and giving the colouring.

Painted windows of the second half of the XVIth century.

In the middle of the XVth century, the revolution in the art of painting upon glass was complete The palette of the painters had been greatly enlarged by means of chemistry, and the quantity of enamel colours at their disposal enabled them to give up entirely glasses coloured in the mass, and to paint upon a single piece of white glass with enamelled colours laid upon its surface. Thenceforth glass was nothing more than the material subservient to the painter, as canvas or wood in oil painting. Glass painters went so far as to copy upon white glass as upon canvas, the masterpieces of Raffaelle, Michael Angelo, and the other great painters of the Italian Renaissance. They executed small pictures most highly finished, and attained to great richness of colouring through their skilfulness in coating the enamel colours upon each other. The use of grisaille became very frequent; a simple stroke upon the white glass sufficed to give the outlines; light grey tints for the shadows, and the high lights expressed by a bright yellow, completed the composition. We also find entire windows painted in monochromatic tints.

Claude, Bernard Palissy, Guillaume, Jean Cousin,

or coloured crystal, to double their thickness and brilliancy by artificial and sometimes fraudulent means.

* Earthen vessels in which delicate substances may be strongly heated and at the same time protected from the contact of the fire.

Pinaigrier, and many others, distinguished themselves in this style of painting, and produced works of great correctness of drawing and remarkable execution. But the era of glass painting was at an end. From the moment that it was attempted to transform an art of purely monumental decoration into an art of expression, its intention was perverted, and this led of necessity to its ruin. The resources of glass painting were more limited than those of oil, with which it was unable to compete. From the end of the XVIth century, the art was in its decline, and towards the middle of the XVIIth was entirely given up.

Heraldic painted windows of German-Switzerland.

At the beginning of the XVth century, painted glass had been used, as observed before, in the decoration of private houses; a taste which prevailed chiefly in Germany and Switzerland. Nuremberg, Ulm, Freyburg-in-Breisgau possessed, at the end of the XVth century, and at the beginning of the XVIth, first-rate masters of the art of glass painting.*

From these schools issued artists who settled in German Switzerland, and who carefully preserved until the beginning of the XVIIIth century the style of the large church windows of the XVth, by uniting with the brilliant colouring of the glass, tinted in the mass, and the coated glasses before mentioned, all the finish that can be obtained on the flesh tints and small subjects, by the application of vitrifiable colours upon the surface of colourless glass.

The windows of the castles, town halls, rich abbeys, and private habitations in Germany and Switzerland, were decorated with this admirable painted glass. For the nobility, artists represented the arms of the family, framed by architectural decorations; for the houses of the commonalty, the coats of arms of the town or of the canton, supported by standard-bearers in the costume and armour of the time; for the abbeys, a full-length figure of the founder of the order. Citizens and artists had the badges of their profession placed in a shield. Lastly, nobles, citizens, and artisans often had their own portrait taken in proper costume, accompanied by their wives and children.

These painted windows, therefore, possess a great interest,

* Kugler, *Handbuch der Kunstgeschichte*, S. 766.

independently of their artistic merit, inasmuch as they exhibit the manners, customs, and arms of a period already very remote, and they give the portraits of persons who, without having a name in history, have yet occupied in their time a distinguished rank in the cities they inhabited.

Among the most skilful masters of the art of painting upon glass, in this style of workmanship, are named the brothers Stimmer and Christoph Mauer, who flourished in the third quarter of the XVIth century.*

§ IV. PAINTING IN OIL.

Portable pictures of the middle ages.

If no specimens have reached us of mediæval painting, designed for the embellishment of private life, their fragility is the sole cause to which this must be attributed; it would be a mistake to draw from it the inference that the artists of this period devoted themselves exclusively to monumental painting.

Yet, only a few years since, it was supposed that the Greeks alone, until near the end of the XIIIth century, had been capable of producing small paintings of sacred subjects, adapted for placing in dwellings, or carrying about the person. But the conscientious study now made of the mediæval epoch will gradually dispel the errors propagated by the writers of the XVIth century.

Thus, Vasari attributes to Margaritone, a Florentine painter, sculptor, and architect, who died in the last ten years of the XIIIth century, the discovery of a process by the aid of which painting could be rendered more durable and less liable to split. "Upon a panel of wood he spread," says the Italian biographer, "a canvas which he secured by means of a strong glue, made from the shreds of parchment, over this canvas he applied a layer of gypsum before painting upon it." † From this it was concluded that Margaritone had first painted portable pictures in Italy; but we find on the contrary, that the processes attributed to Margaritone had been described more than one hundred years before him in the Treatise of Theophilus.

* Kugler, *Handbuch der Kunstgeschichte*, S. 795.
† Vasari, *Life of Margaritone.*

The learned monk, in the 17th and 19th chapters of the first book of his Treatise, describes the method of joining several panels of wood, of covering them with leather or canvas, and in this state overlaying them with several coats of plaster to prepare them for receiving the painting.*

Further on (chapters 22nd and 26th),† he gives the manner of preparing the wood to receive the painting, where it cannot be covered with leather or canvas, as for instance in saddles, folding chairs, and footstools, which are partly carved.‡ Lastly, he points out the method of sketching the outline,§ of preparing the colours, and of painting the subject.‖

If the artists of the XIIth century were so well acquainted with the mode of preparing panels of wood to receive the painting, if they even enriched with painted subjects their seats, and the saddles of their horses, how can it be imagined that, during a period of religious fervour, they should not have executed upon wood some of those "petits tableaux cloans de deux pièces, histoires de plusieurs saints," which are mentioned in the old inventories? ¶

True, the Greeks were the first to paint these little pictures; the iconoclastic persecution had multiplied them in the VIIIth century, and although the priests and the monks who had followed the crusades had brought back a great number, the Italians sought these portable works of the

* "Primum particulatim diligenter conjungantur asseres junctorio instrumento, quo utuntur doliarii sive ornarii . . . Deinde componantur glutine casei . . . Postmodum æquari debent planario ferreo . . . Inde cooperiantur corio crudo equi, sive asini, sive bovis . . . quod humidum cum glutine casei superponatur . . . Post hæc tolle gypsum more calcis combustum, sive cretam, qua pelles dealbantur, et tere diligenter super lapidem cum aqua; deinde mitte in vas testeum, et infundens gluten corii, pone super carbones, ut gluten liquefiat, sicque linies cum pincello super ipsum corium tenuissime; ac deinde, cum siccum fuerit, aliquantulum linies spissius; et si opus fuerit, linies tertio . . . Si vero defuerit corium ad coperiendum tabulas, eodem modo et eodem glutine cooperiantur cum panno mediocri novo lini vel canabi." Lib. i, capp. 17, 19.

† Mr. Hendrie's translation, Chapter 23.

‡ "Sellas autem equestres et octoforos, item sellas plicatorias, ac scabella et cætera, quæ sculpuntur, et non possunt corio vel panno cooperiri . . ." Cap. 22.

§ "Posthæc in stylo circino et regula metire, et dispone opus tuum, videlicet imagines aut bestias, vel aves et folia, sive quodcunque pertrahere volueris." Cap. 22.

‖ "Ac deinceps accipe colores quos imponere volueris, terens eos diligenter oleo lini sine aqua, et fac mixturas vultuum ac vestimentorum sicut superius aqua feceras, et bestias sive aves aut folia variabis suis coloribus, prout libuerit." Cap. 26.

¶ *Inventaire de Charles* V. MS. Bibl. roy., no. 8356.

Greeks,* more than ever in the XIIth century. It is precisely for this reason, that the western artists would have striven to imitate them. When these little pictures that have come down to us appear to have been the work of Greek artists, the reason of this is obvious. The Byzantine school reigned paramount in Italy until the arrival of the Pisans and of Giotto, and also in the schools of Bohemia and Cologne, (Fig. 28), the most ancient in northern Europe, until towards the end of the XIVth century.†

Fig. 28. Coronation of the Virgin. Early Cologne School. From the Boisserée Collection now at Nuremberg.

In like manner, the invention of oil painting has been attributed to John Van Eyck, as that of preparing the panels of wood has been to Margaritone. This again is owing to Vasari, who, in the first edition of his Lives of the Painters, asserts that the great master of Bruges was the author of this important discovery, although more than an hundred years had elapsed since his death, without any document having ever been published attributing to him this invention. But, scarcely had Vasari's work appeared, than the Flemish and Dutch writers hastened to avail themselves of the statement of

Oil painting was known in the XIIth century.

* E. David, *Hist. de la peinture*, edit. 1842, p. 123.

† Of this we may form an opinion by the pictures of Thomas of Mutina (1352) and of Theodoric (1357) both of Prague, to be seen in the gallery of the Belvedere at Vienna, and by those of Meister Wilhelm (1383) in the Pinacotheca of Munich.

Vasari, and even improved upon it. These assertions have long been completely refuted. John Van Eyck, in painting with oil, employed only the processes known long before his time. Of this, it is again our learned monk Theophilus who furnishes the proof; and though we may not affirm that Theophilus himself is the author of the invention, he having had the modesty not to claim the honour, it must be at least admitted that he has been the first to describe the details of the process.* It is probable that Van Eyck improved upon the old methods, and discovered oils which would dry without being exposed to the sun. To him, therefore, is due the honour of improving, not of inventing, the art of painting in colours ground with oil.

Fig. 29. Workshop of a painter of the XVth century. MS. in the Imp. Lib. Paris.

But we ought not to enlarge any more upon this subject. It is not our intention to make known the history of oil painting, this class of the art comes within our limits, only inasmuch as it has been applied to the decoration of domestic altars, these being designed for the interior of habitations are true specimens of private life, and it is only with paintings of this clsss that we should occupy ourselves.

Although the mediæval artists possessed, as we have just

* "Accipe semen lini, et exsicca illud in sartagine super ignem sine aqua. Deinde mitte in mortarium et contunde illud pila donec tenuissimus pulvis fiat, rursumque mittens illud in sartaginem, et infundens modicum aquæ, sit calefacies fortiter. Postea involve illud in pannum novum, et pone in pressatorium, in quo solet oleum olivæ, vel nucum, vel papaveris exprimi, ut eodem modo etiam istud exprimatur. Cum hoc oleo tere minium sive cenobrium aut quem alium colorem vis super lapidem sine aqua, et cum pinecllo linies." Cap. 20. Upon this question may be consulted an excellent dissertation of M. Leclanché, in his translation of Vasari. Paris, 1841, t. iii. p. 7.

said, every means of making little portable pictures of great solidity, and although they certainly did paint some, it yet appears that during that period, the preference was always given in the West to carved ivory and wood. In fact, even at the end of the XIVth century, we find few domestic altars executed in painting, while those in wood, and especially in ivory, are very numerous.*

Domestic altars of the XIVth, XVth, and XVIth centuries.

In the last years of the XIVth century, cabinet paintings, and small cabinet pictures with folding sides, were brought into fashion by the brothers, Hubert and John Van Eyck,† (Fig. 30) who have left a great number of their works. The finest are at Bruges, Antwerp, Dresden, Berlin, and in the Pinacotheca of Munich. Towards the middle of the XVth century, the custom began, as we have seen above, to cover with painted subjects the shutters or wings of the altar-pieces designed for private dwellings, the central part alone being still carved. Soon afterwards, the great progress of painting in Italy, Flanders, and Germany, caused its general use for domestic altars in preference to sculpture.

Fig. 30. The Virgin Mary. Attributed to Hubert Van Eyck. XIVth cent. Part of the altar-piece of the Adoration of the Lamb. Ghent.

* The very voluminous inventories of the riches of Charles V. (MS. Bibl. roy., no. 8356) and of Charles VI. (MS. ibid., *fonds Mort.*, no. 76) mention very few painted pictures. In that of Charles V., fol. 184, we read: "Ung très ancien tableau convert d'argent doré, où est peint N. S., qui a ung dyadesmo enlovez sur la teste." This was doubtless a Byzantine painting; and at folio 222: "Ung grant tableaulx peint de cinq pièces et sont de la vie de Notre-Dame et de la Passion." This may have been either a French or a Flemish picture.

† Hubert Van Eyck died in 1426; John, the younger brother, in 1445.

In Flanders, the pupils of Van Eyck, and the painters who adopted his style, Hugo Van der Goes,* Mekenem,† and the charming Hemling; ‡ and in Germany, Martin Schön,§ and Wöhlgemuth; ‖ all these produced some admirable works of this description. The shrine of St. Ursula (Fig. 31), by

Fig. 31. Shrine or reliquary of St. Ursula, by Hans Hemling. XVth century. In the chapel of the Hospital of St. John at Bruges.

Hemling, is one of the most interesting specimens of the master; the drawing of the small figures has nothing of the stiffness of his larger paintings (Fig. 32), and the expression in the heads, the delicate finish of the execution, and the beauty

* Museum at Berlin, and Belvedere at Vienna. † Pinacotheca of Munich.
‡ Pinacotheca of Munich, Museum at Berlin, and Chapel of St. Maurice at Nuremberg. § Belvedere at Vienna. ‖ Ibid.

and brilliancy of the colouring render it a work of the highest merit.*

Fig. 32. Martyrdom of St. Ursula. One of the paintings on her shrine by Hemling. XVth. century. Hospital of St. John, Bruges.

In the first half of the XVIth century, Albert Dürer,† George Pens,‡ Lucas of Leyden,§ Johann Schoreel,‖ Van Mehlem,¶ and many other distinguished painters also executed some of these small folding pictures. Albert Dürer is scarcely known except by his engravings, and the variety displayed in his painted compositions cannot be appreciated,

* The best collection of Hemling's works is in Bruges, and particularly in the Hospital of St. John, where they are preserved in the chapter hall. Two of them are altar-pieces with wings.

† Museum at Augsburg. ‡ Belvedere at Vienna.

§ Pinacotheca of Munich, and Gallery of the King of Belgium, with the date, 1517.

‖ Pinacotheca of Munich.

¶ Ibid. This artist, the pupil of Schoreel, flourished in Flanders towards the

or a faint idea formed of them without visiting the museums and collections in Germany, where his works have been

Fig. 33. Adoration of the Trinity. Albert Dürer. XVIth century. In the Belvedere at Vienna.

collected. "L'enthousiasme de la jeunesse d'Albert Dürer," says M. Fourtoul,* "fut surtout employé à rechercher la trace de l'école de Bruges, dont il perfectionna le brillant coloris par

middle of the XVIth century. He was the last offspring of the race of the old masters of the Lower Rhine, and united in his charming composition to the pure style of the ancient school of Cologne which so much expressed Christian elevation, the perfect imitation of nature which he owed to the study of the masters of Bruges. Pictures of this master are rare, the Pinacothecа of Munich (5th cabinet, nos. 74, 75, 77, 78, 81, 82, 83) and the Museum at Berlin (Flemish and German Schools no. 89 "the Trinity") possess some very valuable ones.

* *Art en Allemagne*, t. ii. p. 137.

des finesses toutes nouvelles ; plus il avança en âge, plus au contraire il s'efforça de s'élever jusqu'au style italien ; dans l'intervalle il étudia les traditions les plus diverses et les plus lointaines, prenant à chacune des écoles de son pays les figures, les gestes mêmes qu'elles avaient trouvés, illustrant ses plagiats au lieu de les déguiser, cherchant jusque dans

Fig. 34. The Salutation. Part of a domestic painting by Lucas of Leyden. XVIth century. In the collection of M. Fould at Paris.

les manuscrits les anciens modèles byzantins et les reproduisant avec un sentiment profond de la vie moderne." It would be impossible to notice with greater precision or brevity the peculiar character of Albert Dürer's talents.

Setting forth at the age of twenty, from the workshop of Wöhlgemuth, where he had learned the principles of German art, Dürer visited the Low Countries and Italy, and returned to Nuremberg in 1494. Eleven years afterwards, he again left his country and went to Venice, where he dwelt in the end of 1505, and in 1506. Later, in 1520 and 1521, he visited Flanders and Holland. The friend of Lucas of Leyden, and in correspondence with Raffaelle, he formed a style, as it were, between the two, which, united to the

brilliant delicacies of Flemish naturalism, the most elevated and most varied of Italian idealism, thus pressing into his service both old and new. These various tendencies did not prevent him from preserving his own peculiar characteristics, a great richness of imagination, which carried him towards supernatural or symbolical expressions, an admirable energy, and the closest imitation of nature. This is fully exhibited in the celebrated painting by Albert Dürer, known under the name of the Trinity (Fig. 33), now in the Belvedere at Vienna.*

From a domestic altar-piece by his friend Lucas of Leyden, fig. 34 is taken. It is one of the paintings on the wings. The whole piece consists of twenty-four subjects illustrative of the life of our Saviour.

§ V. PAINTING IN EMBROIDERY.

No sooner had mankind acquired the art of producing textile fabrics for clothing, than they sought to decorate them with the same materials of which the stuffs themselves were composed; so that painting in embroidery must have been one of the earliest methods of delineating ornaments and figures. In ancient times, the history of Gods and heroes was embroidered upon the outstretched curtains of the temples, while women of the highest rank made this work their favourite employment. Andromache, shut up in her palace, was engaged in embroidery at the moment that cries of distress apprised her of the death of Hector.†

Mediæval painting in embroidery.

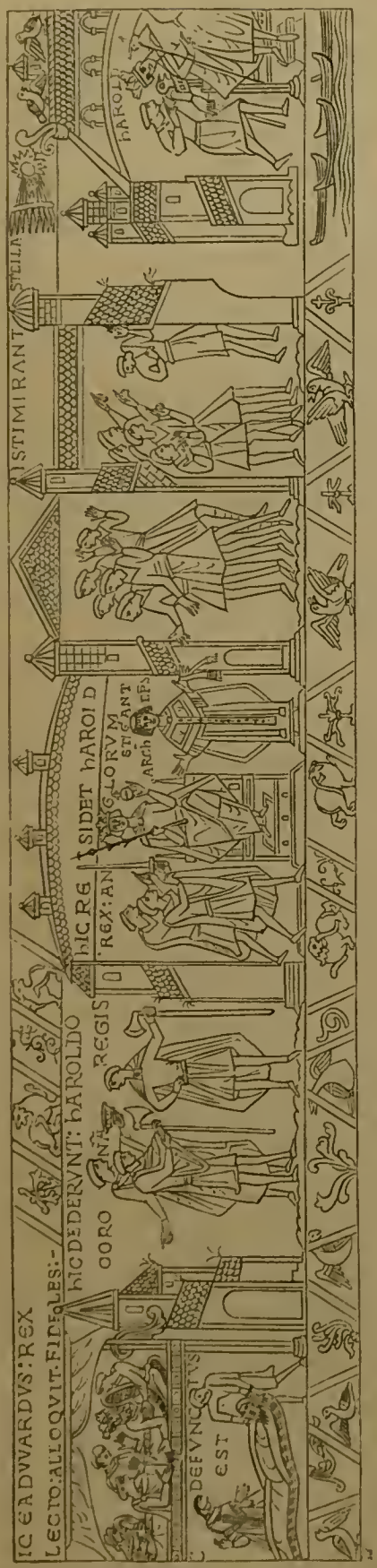
In the first centuries of the middle ages, Christians did not fail to represent the image of Christ, and the Virgin, and of saints upon the pontifical ornaments, upon the tissues that decorated the altar; ‡ and the "veils" or curtains of the churches. In the

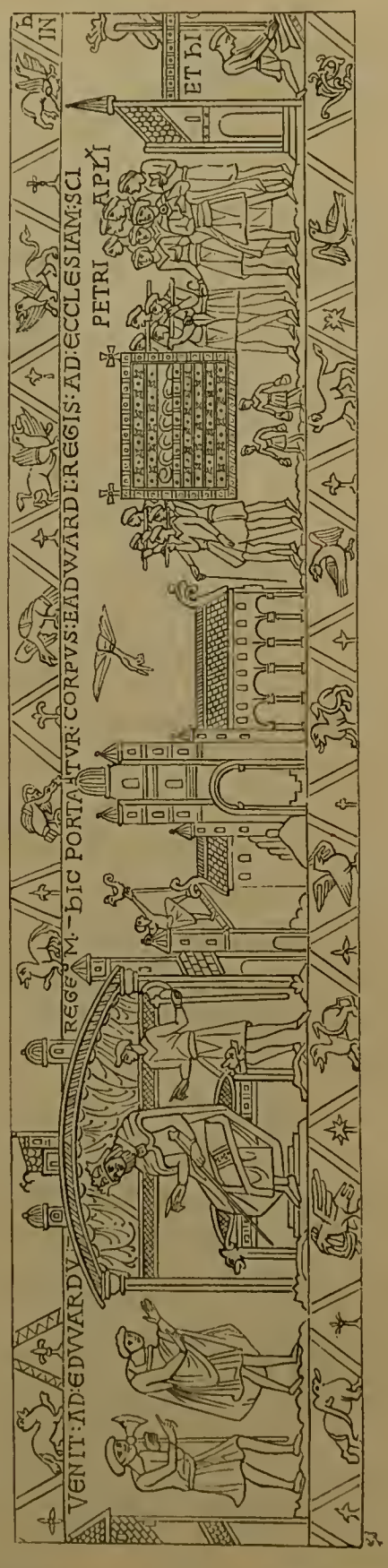
* It was painted for a church in Nuremberg, whence, like many of his works, it was removed to Prague. It is dated 1511.

† "In the secret apartment of her high dwelling, she was weaving a double cloth, resplendent with purple, and she had ornamented it with various flowers."—Homer, *Iliad*, b. xxii.

‡ Called frontal, (*antipendium*): this pall, or ornamental hanging, appended to the front of the altar, was often made of cloth of gold, or of velvet, or the richest silk enriched with embroidery. Frontals were also made of the precious metals, like the Pala d'oro of St. Mark, and golden frontal of Basle, or of wood painted, gilt and set with coloured glass or crystal, like that which formerly belonged to the high altar in Westminster Abbey and is still preserved.

Vth century, the art of weaving stuffs and enriching them

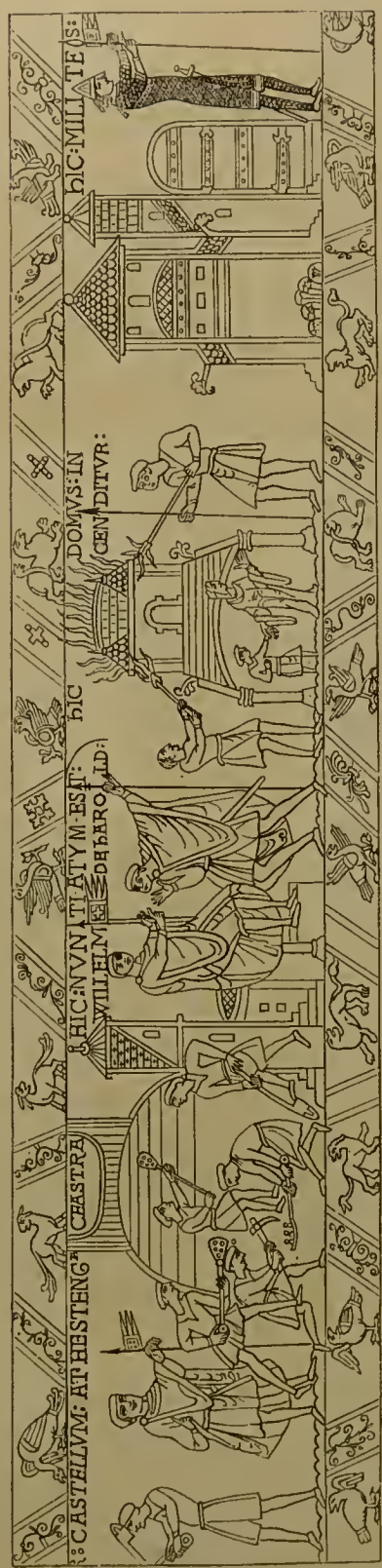


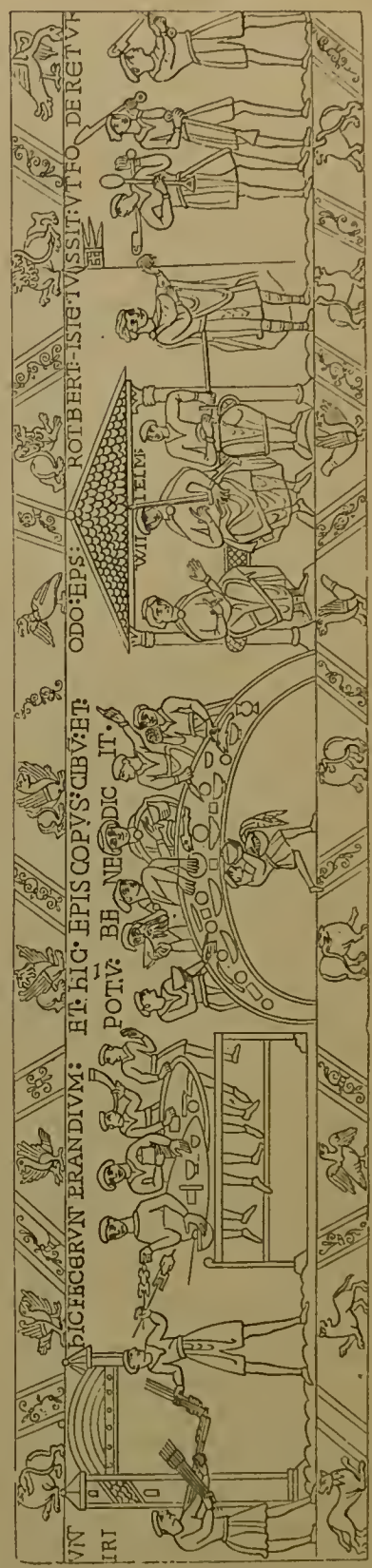


ig. 35. From the Bayeux Tapestry. XIth century. Preserved in the Public Library at Bayeux.

with subjects in embroidery was carried to a high degree

of perfection: the whole history of Christ was embroidered





Bayeux Tapestry.

on the toga of a Christian senator.* Anastasius Bibliotheca-

* Theodoret, *De provid.* Orat. iv. t. iv. p. 361, quoted by E. David, *Hist. de la peinture*, p. 42.

rius, in his History of the Popes, has left the description of a number of ornaments of this kind, which the popes and emperors had given to the churches from the IVth to the IXth century, and has even recorded the style and subjects of the embroidery.* These embroideries, executed in gold and silver thread upon silk stuffs of the most brilliant colours, must have produced a wonderful effect.

Fig. 36. Mitre of Thomas à Becket. Cathedral at Sens.

The tapestry of Queen Matilda, preserved in the library at Bayeux (Fig. 35), is only an embroidery in wools of various colours upon a large piece of linen; it affords a proof that this kind of painting, although on the decline with regard to drawing, was practised in France in the XIth century. We possess as a specimen of the embroidery of the XIIth, the episcopal vestments (Fig. 37) of Thomas à Becket, preserved in the cathedral of Sens.† Besides, it is easy to judge by the miniatures in the manuscripts of the XIIth, XIIIth, and XIVth centuries, that the sacred ornaments, the curtains (*courtines*) which surrounded the altar during the celebration of mass, and the

* Agincourt, *Hist. de l'art*, t. i. p. 98.

† He fled to Sens 1164, when he escaped from England to avoid the wrath of Henry II. His vests, mitre, alb, girdle, stole, maniple and chasuble, are all shown

"towells" * (*touailles*) spread over it, were made of stuffs

Fig. 37. King Henry VI. attended by Cardinal Beaufort, the Duke of Gloucester, and courtiers. From the tapestry in St. Mary's Hall, Coventry.

in the treasury at Sens. (*Handbook of France*).—They have been figured by M. Du Sommerard, *Album*, 10 series; pl. xxiv. On a visit lately paid to the treasury of the Cathedral of Sens, to see these ornaments, the colours which M. Du Sommerard has restored in his coloured engravings, were found to be very much faded.

* The word "towell," as used in the old inventories, means the rich covering of silk and gold, which used to be laid over the top of the altar, except during mass. It also refers to linen altar-cloths, or is employed in the ordinary acceptation. St.

enriched with figures and embroidered subjects; and also that the beds, tables, and seats in houses of the rich were covered with similar fabrics.

In addition to these figured representations, we have the written descriptions afforded us by the old inventories. Thus, we read, for example, in the inventory of the effects of the chapel of Charles V.: "Une mictre brodée sur champ blanc et est orfrasée d'or trait à ymages, et fut au pape Urbain.—La grant chapelle qui est de Camocas d' oultremer brodée à ymages de plusieurs ystoires.—Une touaille parée, brodée à ymages de la Passion sur or.—Breviaire couvert du brodures aux armes du roy Jehan quand il estait duc de Normandie." *

Not satisfied with embroidering stuffs intended for the service of the church, or the decoration of houses, the embroiderers proceeded next to execute portable pictures, which rivalled the carved and painted domestic altars. So we read in the same inventory, folio 232: "Ung tableaux de broderie òu sont Notre-Dame, sainte Catherine, et saint Jean l'évangeliste, et ung estuy couvert de veluiau vermeil."

In the XVth century, painting in embroidery had shared in the great progress which was made at that time in all the arts of design. (Fig. 38.) We may instance, as a fair specimen of that period, the ornaments for the use of the chapel of Charles the Bold, duke of Burgundy, which are preserved in the cathedral of Berne.†

This style of painting was still cultivated in the XVIth and XVIIth centuries, in the last century it had been almost abandoned.

Few pieces of embroidery remain to us, and the colours of those which have been preserved, are much faded by time.

§ VI. PAINTING IN MOSAIC.

By mosaic, is understood the art of producing a design or painting by the combination of small pieces of hard or

George's Chapel, Windsor:—"Item, a blest Towell for the High Altar, of black silk, with gold stripes. Item, a Towell of white silk, with gold stripes."

* MS. Bibl. roy., no. 8356, folios 106, 110, 119, 279.

† See *Anciennes tapisseries historiées*, texte par Achille Jubenal, gravures par Victor Sansonetti, Paris, 1838. In this splendid work, the tapestries of Berne, Bayeux, Nancy, La Chaise-Dieu, &c., are all given in coloured plates.

hardened substances, either naturally or artificially coloured. Hard stones, marbles, pastes of glass, are the materials most frequently used in this kind of work.

Mosaic painting was practised by the ancient Asiatic nations; the Greeks excelled in the art, and transmitted its processes to the Romans. It was originally designed for the decoration of the pavement of buildings, but it soon sought to rival oil painting, and usurped its place in the embellishment of walls, and the vaulted ceilings of churches.

Fig. 38. Justinian and Theodora. Mosaic of the VIIIth century. Church of St. Vitale, Ravenna.

When the Christian religion, under Constantine, was

triumphantly installed in the Roman empire, she accepted mosaic as the principal art for the decoration of the basilicas. Hence it greatly improved; and the walls of the churches raised by Constantine and his successors in the capital of the empire, were covered with paintings

Mediæval mosaics.

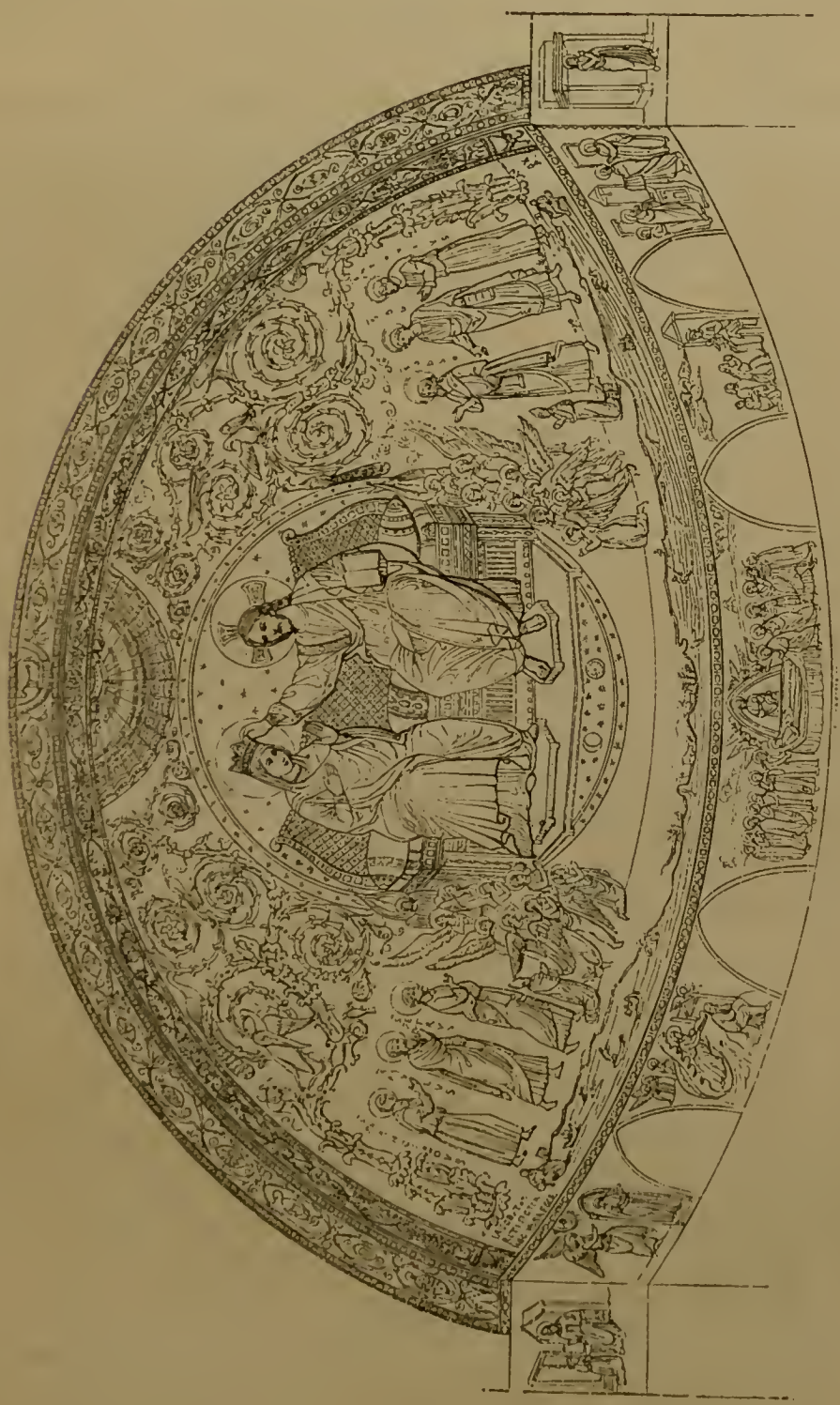


Fig. 39. Christ enthroned with the Virgin. Mosaic about 1300. Tribune of Sta. Maria Maggiore, Rome.

in mosaic. (Fig. 39.) The Greeks enriched this art with new

processes, and with their love of ornament, they devised a method of introducing a ground of gold and silver leaf under the cubes of glass, by this means shedding over the large works of the artists in mosaic a splendour before unknown.*

The hardness and inflexibility of the coloured substances used in mosaic, have secured great stability to its productions; its colour experiences no change from the action of the sun, weather, or damp. These qualities have imparted to it an eminently historical character, and by transmitting types and signs with fidelity, it furnishes in Christian churches where it has been preserved, a faithful pictorial tradition of ancient rites and customs. In mosaics, therefore, as in the miniatures of manuscripts and the glass windows of the times, may be studied the history of painting during the first centuries of the middle ages. The church of St. Mark at Venice, with its series of mosaics, is still an incomparable museum, in which may be easily traced the progress of art, and the various changes of style, beginning with the XIth century.

The principal artists in this style of painting were the Greeks of the Lower Empire (Fig. 40), until the time that Cimabue, Gaddo Gaddi, and Giotto, imparted to the rude designs of the Byzantine school a grace and nobleness which foretold a new era in the art. (Fig. 41.) But mosaic was destined to perish by the hands of those who had carried it to perfection, since painting, restored by these great masters, proved too powerful a rival. Instead of perpetuating the gigantic figures of solemn severe aspect which pourtrayed the Saviour, the Virgin, and the Apostles, according to the type of the Byzantine school, the artists in mosaic endeavoured by the most elaborate finish and minuteness to imitate the details of painting. But when once it departed from its sphere, mosaic experienced the fate of painting upon glass, and was almost entirely discontinued. Yet the art continued to flourish at Venice till nearly the end of the XVIth century, supported by the patronage of the senate, and encouraged also by Titian, who declared himself the protector of the mosaic artists, and

In the XVIth, XVIIth, and XVIIIth centuries.

* Theophilus, *Diversarum artium schedula*, lib. ii. cap. xv.

furnished them with coloured cartoons, after which the ancient Byzantine mosaics of St. Mark were restored.*

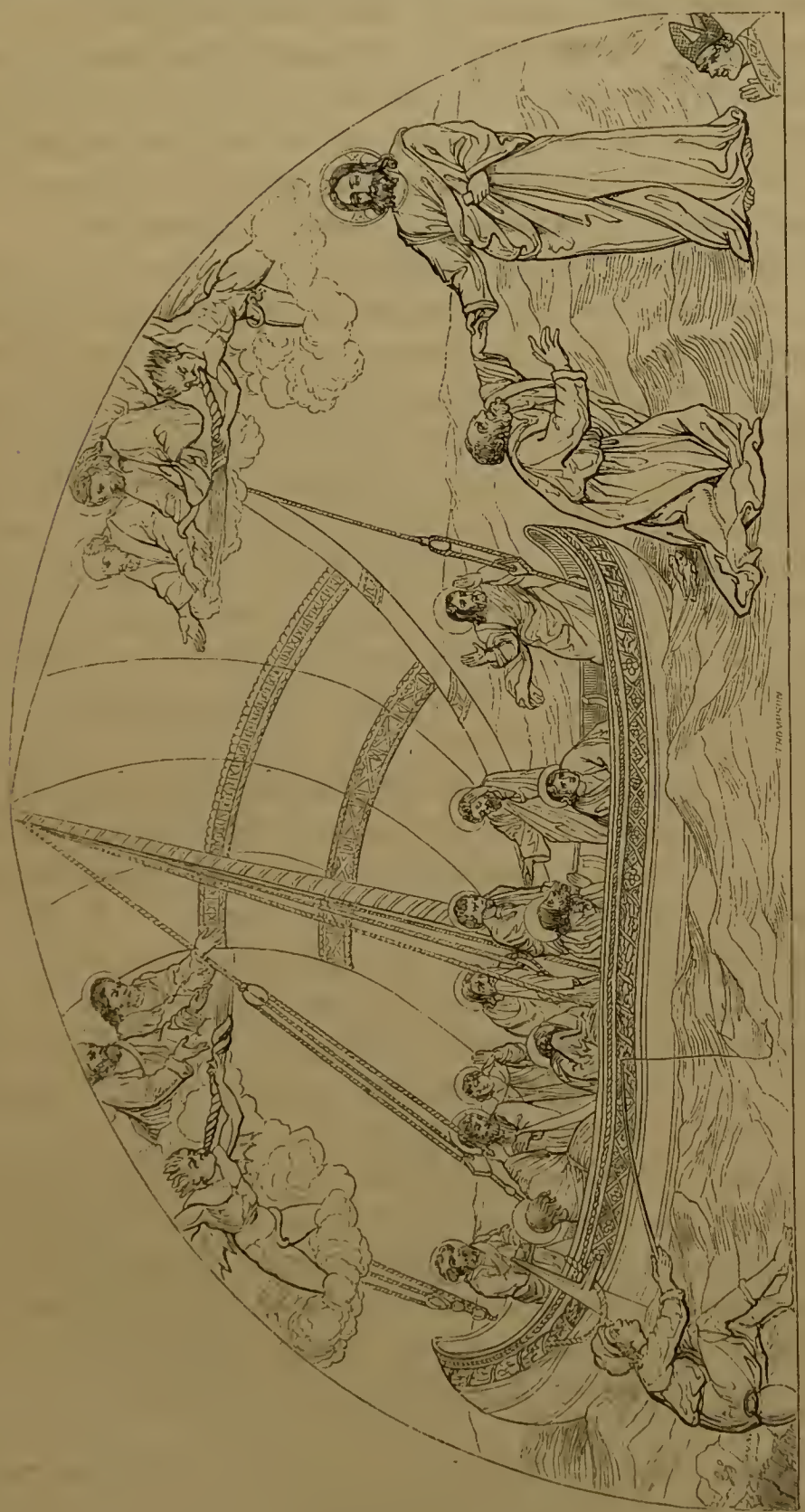


Fig. 40. The Navicella. Mosaic, partly after the design of Giotto, XIVth century. Vestibule of St. Peter Rome.

In restricting mosaic to the imitation of painting, the

* Vasari, *Life of Titian.*

artists were obliged to improve its mechanical processes; instead of the little stones and the cubes of glass of which it had been formerly composed, they now employed coloured enamels, reduced to strips of various forms and sizes, the different shades of which have been estimated at ten thousand. By means of these enamels they were able to produce every colour, to emulate every half tint, and to represent every transition and degradation of tone. Possessed of such powerful resources, mosaic, towards the end of the XVIIth century, was wonderfully restored to favour, and brought to great perfection. It was then employed to render an important service to art in the reproduction, in more durable materials, of the masterpieces of the great painters. The popes, by causing the finest paintings of the Vatican to be copied in mosaic for the church of St. Peter, have secured their immortality.* In works of small size, mosaic has succeeded in treating with inconceivable minuteness, landscapes, buildings, and even portraits, and is enabled to render with the truth of painting, skies, water, foliage, and even the lightness of the hair of animals.

Florentine mosaics.

Under the name of mosaic has been improperly included a kind of polychromatic sculpture in high relief, cut out in the form of the object to be represented, and executed in hard stone (*pietra dura*). It is generally employed in the decoration of furniture; sometimes it is executed upon a marquetry ground formed of stones of various colours. The Florentine mosaic is entirely different from the Byzantine Roman, no colours being employed, except those that are natural to the stone.

Works in this style were first made at Florence, under Cosmo I., and the Grand-ducal manufactory has always from that period maintained its well deserved reputation.† The most splendid examples of this work are in the decorations of the Medici Chapel, the walls of which are entirely covered with mosaics of *pietre dure*, intermixed with precious stones.

* Ghirlandajo used to say that mosaic was the only painting for eternity.—Vasari *Life of Ghirlandajo.*

† These Florentine mosaics are called, *Lavori di commesso.*

CHAPTER III.

ENGRAVING.

The art of producing figures and ornaments by incised lines on the plane surface of a metal plate is not of modern invention. The Greeks and Romans, and even before them, the Egyptians, and some of the Asiatic nations, knew how to decorate metal by tracing on it with the burin the purest and most delicate designs. This art, transmitted by antiquity to mediæval times, was during that period exercised almost exclusively by goldsmiths and armourers, and employed principally in the ornamentation of arms and sacred vessels (Figs. 41, 42). These artists often incrusted in the metal incisures slender threads of gold and silver; sometimes they filled them with a black enamel (*nigellum*,* *niello*,†), at others with a coloured one. The pieces thus decorated belong to damascene work and the goldsmith's art, and will therefore be noticed later under these different heads. (Figs. 43, 44.)

Antiquity of the art of engraving upon metals with the burin.

Fig. 41. Broken Silver Vase, the letters engraved in niello. IVth or Vth century. Discovered near Mount Esquinal, 1793.

Fig. 42. Silver Vase, chased and damascened with figures and arabesques. IVth or Vth century. Discovered near Mount Esquinal, 1793.

With regard to the art of printing engravings upon incised

* Theophili *Diversarum artium schedula*, l. iii. cap. xxvii.
† B. Cellini, *Tratt. dell' orfév.* cap. ii.

metal plates, to which, as is generally known,* the art of working in niello gave birth, it is foreign to the purpose of our treatise. The aim of the chalcographic artist is to reproduce a drawing, a painting, or a work of statuary, and by multiplying impressions of it, to make it more extensively known; but not to assist in the ornamentation of a vase, a piece of furniture, or any other work of art. As it therefore may be matter of surprise that we should take any notice of engraving, we briefly explain our reasons.

Fig. 43. The Crucifixion. Copperplate engraved, enamelled and gilt. Probably forming, with Fig. 44, part of a book-cover. End of XIIth century. Coll. Soltykoff.

The goldsmiths of the XIVth and XVth centuries were not

Fig. 44. Abel and Melchisedec. Engraving on Copper, decorated in the same manner as Fig. 43. End of XIIth century. Coll. Soltykoff.

only skilful draughtsmen, but sculptors, chasers, and en-

* "Maso Finiguerra, natif de Florence, orfèvre et sculpteur, élève de Laurent Ghiberti et de Masaccio, exécutait en 1452 une *Paix*. Avant de répandre le *niello* sur la planche déjà gravée, avant même de terminer la gravure, voulant juger des progrès de son travail, il prit, suivant l'usage pratiqué dans cet art, une empreinte avec de l'argile. Sur cette argile, où les traits etaient en relief, il coula des épreuves en soufre; et dans les sillons du soufre, il répandit du noir de fumée qui lui repré-

gravers; they had not recourse to other artists for their models; the invention, as much as the execution, was their own (Fig. 45). But when in the XVIth century a taste for the style of the Renaissance had extended over all Europe, and everyone desired to remodel their jewels, their plate, their arms, and ornamental furniture according to the taste of the day, the general demand was met by increased numbers of artists of every description; but though all possessed a certain amount of manual dexterity, there were many, too ignorant of the arts of design, or too little gifted with a genius for invention to produce an original model, impressed with the elegance and purity required by the new style. The most ingenious of these artisans and some artists of distinction set to work to engrave, with great fertility of imagination, a variety of patterns for jewels and goldsmith's work, arabesques, and ornaments of every kind, from which the goldsmiths, jewellers, armourers, enamellers, and makers of furniture and utensils for common use, drew their subjects and ideas.

Fig. 45. Crosier. From an Engraving by Israel Van Meckenem. XVth century.

The engravers known under the name of "Petits-Maîtres," pupils, or imitators of Albert Dürer, were the first to distinguish themselves in this class of composition.

The most celebrated among them are Albrecht Altdorfen, Heinrich Aldegrever, Georg Pens, Hans Sebald Beham, Virgilius Solis, Theodor de Bry, and Jean Collaert. In company with

sentait les effets du *niello*. Pour apprécier ces effets sur un fond plus clair, il conçut l'idée d'imprimer des épreuves en soufre; et dans les sillons du soufre, il répandit du noir de fumée qui lui représentait les effets du *niello*. Pour apprécier ces effets sur un fond plus clair, il conçut l'idée d'imprimer des épreuves sur un papier humecté, ainsi que le faisaient les graveurs en bois. Cette belle expérience fut ensuite répétée avec une encre plus durable, sur la planche d'argent, lorsque l'artiste l'eut enrichie de nouveaux travaux, et Finiguerra obtint de véritables estampes sur cette planche qu'il avait gravée dans une autre intention."—E. David, *Hist. de la gravure*, Ed. 1842, p. 172.

these German and Flemish engravers,* should be named two French artists, Étienne de Laulne, often called Stephanus, a delicate worker of the burin, and Pierre Woeiriot, a skilful wood engraver.

It is therefore thought expedient to allude to the works of these skilful engravers to serve as points of comparison with the jewels and small objects of art, whether carved, enamelled, or damascened, of the XVIth century. Several enamels of Courtois and Raymond have been copied from the fine and spirited engravings of Étienne de Laulne. Many engraved watch-cases, many knives with handles of enamelled gold, or engraved silver, have been copied from the designs of Theodor de Bry; and we shall find many jewels in the style of those published by Collaert.

* In addition to these, Lacombe enumerates Suart-jan, Martin Schorecl, Jerome Bos, Cornelius Engelbrechts, Israel Van Meckenem, Lucas Gaffelli Binco, Lucas Van Leyden, Theodore Mayer, Hisbius, Crispin, Madeleine and Barbe de Pas. Lacombe, *Dictionnaire des Beaux-Arts.* Art. Petit-Maîtres.

CHAPTER IV.

ENAMELS.

The name of enamel has been given to substances of a vitreous nature, variously covered by metallic oxides.

Enamels are either opaque or transparent. Opacity is obtained by an addition to the vitreous mass of a certain quantity of oxide of tin.*

The art of enamelling is of a very early date, and its application to ornamenting articles of domestic use, may be traced among almost all the civilised nations of antiquity. But, confining ourselves within the prescribed limits of this essay, we shall only notice the productions of the middle ages.

Antiquity of the art of enamelling.

The subject of the present chapter will be enamel applied to painting on a metallic excipient; and in treating of the Keramic art, we shall speak of enamel painting upon pottery. With respect to colouring with enamel metal figures either detached or in high relief, this description of work being less allied to painting than to polychromatic sculpture, will be reserved for the chapter on the goldsmith's art.

Enamel is applied to metals in three different ways, and we thus recognise them as forming three distinct classes: †

* Besides oxide of tin, modern chemists have discovered other substances that may be employed to give opacity to vitreous compounds, but we have confined ourselves to a general definition, our end being to give a general view of the history of the art of enamelling, not to make known the composition of the different enamels. On this point may be consulted the *Traité des couleurs pour la peinture en émail*, by de Montamy; the work of Neri; the *Traité de chimie appliquée aux arts*, by M. Dumas; the *Nouveau manuel de la peinture sur verre, sur porcelaine et sur émail*, by M. Reboulleau; the *Traité des arts céramiques*, by M. Brongniart; the *Traité pratique sur la préparation des couleurs d'émail*, inserted in the Nos. for December, 1844, and January and February, 1845, of the *Revue scientifique et industrielle*.

† The name enamel applies, as we have said, to the coloured vitreous substances attached to the metal by fusion; but by metonymy, we give the name of enamel to

Three classes of enamel.

1. Incrusted.*
2. Translucid upon relief.
3. Painted.

In the first kind, the metal describing the outlines of the design, and sometimes every portion of the figure, receives into interstices, previously prepared, the vitreous matter which gives the colouring of the subject, or sometimes only of the ground.

In the second, the design is executed by means of a delicate chiseling, in bas-relief, upon the metal, the surface of which is covered with translucid enamels.

In the third kind, the metal only answers to the canvas or the wood in oil painting. Vitrifiable colours are laid on with a brush, (sometimes on the surface of the metal, sometimes on a layer of enamel, with which it has been previously coated, *enduit*,†) and produce at once the design and the colouring.

These three modes of using enamel correspond with three very distinct epochs.

§ I. INCRUSTED ENAMELS.

Incrusted enamels are subdivided into two classes. The first has received from French antiquaries the name of *cloisonné*, or *à cloisons mobiles*,‡ the other that of *champlevé*. The different manner of disposing the metal for forming the outline of the design has given rise to the distinction. We propose first to explain the two processes; next to point out the finest specimens of each, and lastly to describe the general character of these two classes of enamels.

To begin with the "cloisonné" enamels.

Cloisonné enamels.

The plate of metal intended to serve as a foundation was first cut into the requisite shape, and provided with a little rim for the purpose of retaining the enamel. Slender strips of the metal of the same width as the

every piece of gold, silver or copper enamelled. We shall often use the term in this acceptation, the sense of the phrase indicating whether we mean the vitreous substance or the piece overlaid with enamel.

* Mr. Franks suggests the term "embedded," and he calls the "cloisonné" enamels "embedded in filagree."

† *Enduit.* Coating in mortar, plaster, stucco, cement, &c., laid upon walls to form an even surface.—Millin. ‡ With moveable casements or partitions.

rim, were then taken and bent in short lengths and fashioned in such a manner as to form the outline of the pattern. These short bits were then joined together and fixed in an upright position upon the plate.

The metal outline being thus arranged, the intervening spaces were then filled up with the various enamels, reduced to a fine powder, and moistened into a paste. The piece was then placed in the furnace, and when the fusion of the vitreous matter was complete, was withdrawn with certain precautions that the cooling might be effected very gradually. If in the firing, the enamel had sunk below the level of the rim, and the other strips of metal, it was again overlaid with a very fine coating and the piece returned to the fire. The enamel, when thoroughly cooled, was ground and polished by various methods.

We see that, in this mode of proceeding, the ancients must have made use of very pure gold, and extremely fusible enamels, in order that the plate might not undergo any alteration from the action of the fire, or the delicate strips of metal be melted by the heat which fused the enamel paste.

The modes of fabrication which we have thus briefly described is related with much detail in the curious work of the monk Theophilus. Written documents relating to mediæval art are so scarce, and so variously interpreted, that we think it advisable to quote the text of Theophilus in support of our description.

Cloisonné enamels were most commonly of small size and were chiefly used for ornamenting vases, shrines, crowns, and other objects, upon which they were fixed in a setting or collet (*chaton*), like precious stones.

Mode of fabrication according to Theophilus.

Theophilus gives instructions for arranging the patterns to be formed by the little fillets of gold.* "Which, being done, take a thin piece of gold and join it to the upper rim of the vase, and measure it out from one handle to the other; this piece must be of

* Book III. chap. lii. "De imponendis gemmis et margaritis." Chapter 54, Mr. Hendrie's translation. In this and the two following chapters Mr. Hendrie has rendered the word *electrum*, by "coloured glass stones," "coloured glass ornaments," "glass gems," "electrum" and "enamel." We prefer adhering to M. Labarte's translation, and have used the word "enamel" throughout. See Mr. Hendrie's note on the word *electrum*, p. 434.

the breadth as is the size of the stones which you wish to place upon it." *

It is this piece of gold which forms the setting of the stones and enamels, as may be seen in specimens which still exist, and which we shall point out further on.

"And, arranging them in their order, thus dispose them: first a stone must stand, four pearls being placed at its angles, then an enamel, next this a stone with pearls, and again an enamel; and you will so arrange them that the stones may always stand next the handles, the settings and grounds of which, and those settings in which the enamel is to be placed, you compose and solder in the order above." †

The form given by the goldsmiths to these settings determining that of the pieces to be enamelled, Theophilus goes on to explain how these leaves of gold are to be prepared in the interior of the settings which they are to fill:—"After this you will adapt thin pieces of gold in all the settings in which the enamel is to be placed, and carefully fitted, you take them out." ‡

The little case of gold being thus made in the shape of the setting which is to fasten it to the vase, Theophilus gives instructions for arranging the pattern which the little strips or bands of gold are to form on the surface of the enamel: "With a measure and rule you cut a small band of gold, which must be somewhat thicker, and you will bend them round the rim of each piece in a double manner, so that a minute space may exist around between these small bands; this space is called the border of the enamel." §

This, however, is a mere fancy of the artist, the little rim or border not existing in all enamels.

* "Quo facto tolle partem auri tenuem et conjunge ad oram vasis superiorem, atque metire ab una auricula usque ad alteram; quae pars latitudinis sit, quanta est grossitudo lapidum, quos imponere volueris."

† "Collocans eos in suo ordine, sic dispone; in primis stet unus lapis quatuor margaritis in angulis positis, deinde electrum, juxta quod lapis cum margaritis, rursumque electrum, sicque ordinabis ut juxta auriculas semper lapides stent, quorum domunculas et campos, easque domunculas, in quibus electrum ponendum est, compones et solidabis ordine quo supra."

‡ "Post hæc in omnibus domunculis, in quibus electra ponenda sunt, coaptabis singulas partes auri tenues, conjunctasque diligentur cicies." Cap. liv.

§ "Atque cum mensurâ et regulâ incides corrigiolam auri quod aliquantulum sit spissius, et complicabis eas circa oram unius cujusque partis dupliciter, ita ut inter ipsas corrigiunculas subtilo spatium sit in circuitu, quod spatium vocatur limbus electri." Cap. liv.

"Then, with the same measure and rule you cut small bands of exceedingly thin gold, in which you will bend and fashion whatever work you may wish to make in enamel, whether circles, or knots, or small flowers, or birds, or animals, or figures; and you will arrange the small pieces delicately and carefully, each in its place, and will fasten them with moistened flour over the coals. When you have filled one portion, you will solder it with the greatest care, that the slender and fine gold may not be disjoined nor liquefy." *

Now there we have the little gold case all arranged, and the outline described by the fine strips of gold above mentioned; it only remains to enamel the piece with colours suitable to the subject. Theophilus, in the succeeding chapter, "De electris,"† describes this process also, after having pointed out the way of proving the enamels.

"All the enamels being composed and soldered in this manner, take all kinds of glass which you had prepared for this work, and breaking a particle from each piece, place all the fragments together upon a piece of copper, each piece by itself, and placing it in the fire, arrange the coals around and above it, and blowing carefully, you will see whether they melt equally; if so, use them all; if, however, any particle is harder than the rest, place it by itself. Taking separate pieces of the proved glass, place them in the fire one by one, and when each one has become glowing, throw it into a copper vessel in which there is water, and it instantly flies into small fragments, which you break with a round pestle until made quite fine, and you will thus wash it, and put it into a clean vessel, and you cover it with a linen cloth. In this manner you prepare the separate colours: which being done, take a piece of the soldered gold, and you will fasten it upon a smooth table, with wax in two places, and taking a goose-quill cut to a point, as if for writing, but with a longer

* "Deinde eâdem mensurâ atque regulâ incides corrigiolas omnino subtilissimi auri, in quibus subtili forcipe complicabis et formabis opus quodcunque volueris in electris facere, sive circulos, sive nodos, sive flosculos, sive aves, sive bestias, sive imagines, et ordinabis particulas subtiliter et diligenter unamquamque in suo loco, atque firmabis humidâ farinâ super carbones. Cumque impleveris unam partem, solidabis eam cum maximâ cautelâ, ne opus gracile et aurum subtile disjungatur aut liquefiat." Cap. liii.

† Mr. Hendrie's translation, Chapter 54.

beak and not split, you take out with it one of the colours of glass, whichever you please. That which remains over, replace in its small cup and cover it, and do this with each colour until one piece is filled; taking away the wax, to which it had adhered, place this piece upon a thin iron, which may have a short handle, and cover it with another iron, which is hollow like a cup, and let it be perforated finely all over, so that the holes may be inside flat and wide, and outside finer and rough, in order to stop the cinders, if by chance they should fall upon it." *

This little iron bell has been exchanged in the furnace of our modern enamellers for a muffle; the result is the same; it is only another way of preserving the enamel from contact with the coal.

"This iron may also have a small ring above, in the middle, by which it may be superposed and taken off. Which being done, arrange large and long coals, making them very hot, among which you make a space, and equalise with a wooden mallet, into which the iron is raised by the handle with the pincers, so that when covered you will place it carefully, and arrange the coals round and above it everywhere, and taking the bellows with both hands, you will blow on every side until the coals glow equally. You have also a wing of a goose, or other large bird, which is extended and tied to wood, with which you will wave and fan strongly all over it, until you perceive between the coals that the holes of the iron

* "Hoc modo omnibus electris compositis et solidatis accipe omnia genera vitri, quod ad hoc opus aptaveris, et de singulis partibus parvum frangens colloca omnes fracturas simul super unam partem cupri, unamquamque partem per se; mittensque in ignem compone carbones in circuitu et desuper, sufflansque diligenter considerabis si æqualiter liquefiant; si sic, omnibus utere; si vero aliqua particula est durior, singulariter repone. Accipiensque singulas partes probati vitri, mitte in ignem singillatim, et cum canduerit, projice in vas cupreum in quo sit aqua, et statim resilict minutatim, quod mox confringas cum rotundo malleo donec subtile fiat, sicque lavabis et pones in concham mundam, atque cooperies panno lineo. Hoc modo singulos colores dispones. Quo facto tolle unam partem auri solidati, et super tabulam æqualem adhærebis cum cera in duobus locis, accipiensque pennam anseris incisam gracile sicut ad scribendum, sed longiori rostro et non fisso, hauries cum ea unum ex coloribus vitri, qualem volueris. Quod vero superfuerit repone in vasculum suum et cooperi, sicque facies ex singulis coloribus, donec pars una impleatur; auferens ceram cui inhæserat, pone ipsam partem super ferrum tenue, quod habeat brevem caudam, et cooperies cum altero ferro quod sit cavum in similitudinem vasculi, sicque per omnia transforatum gracile, ita ut foramina sint interius plana et latiora, et exterius subtiliora et hispida, propter arcendos cineres, si forte super ceciderunt." Cap. liv.

quite glow inside, and thus you will cease to fan. Waiting then about half an hour, you uncover by degrees, until you remove all the coals, and you will again wait until the holes of the iron grow black inside, and so raising the iron by the handle, you place it, covered as it is, in the furnace behind, in a corner, until it has become quite cold. Then opening it, you take out the enamel, and will wash it." *

The enamel sometimes sinks in the furnace, and it therefore often happens, when first withdrawn, it is lower than the filagree strips of metal which form the outline. This Theophilus foresees, and adds: "Then opening it, you take out the enamel and will wash it, and will again fill it and melt as before, and you do thus until, melted equally everywhere, it has become full. In this manner, you compose the remaining pieces." †

The enamel, when withdrawn from the furnace, is often irregular in its surface, and almost always requires being polished. In Chapter lv. "De poliendo electro," Theophilus gives the process. "This being done, take a piece of wax the length of half a thumb, in which you will fix the enamel, so that the wax may be all round it; by this wax you will hold it. Then you will rub it for a long time upon a hard and smooth hone, until it acquires a polish; and you will also rub upon the same stone, wetted with saliva, a piece of potter's ware, which is found amongst the fragments of ancient vases, until the saliva has become thick and red; this you anoint upon a flat leaden tablet, upon which you will lightly rub the glass stone, until at length their colours appear transparent and clear; and you will again rub the clay ware upon the hone with saliva, and you anoint it upon

* "Habeatque ipsum ferrum in medio superius brevem annulum, cum quo superponatur et elevetur. Quo facto compone carbones magnos et longos, incendens illos valde; inter quos facies locum et æquabis cum ligneo malleo, in quem elevetur ferrum per caudam cum forcipe; ita coopertum collocabis diligenter, atquo carbones in circuitum compones et sursum ex omni parte, acceptoque folle utrisque manibus undique sufflabis donec carbones aqualiter ardeant. Habeas etiam alam integram anseris, sive alterius avis magnæ, quam sit extensa et ligno ligata; cum qua ventilabis et flabis fortiter ex omni parte, donec perspicias inter carbones ut foramina ferri interius omnino candeant, sicque flare cessabis. Expectans vero quasi dimidiam horam discooperies paulatim donec omnes carbones amoveas, rursumque expectabis donec foramina ferri interius nigrescant, sicquo elevans ferrum per caudam, ita coopertum pones retro fornacem in angulo donec omnino frigidum fiat. Aperiens vero tolles electrum et lavabis." Cap. liv.

† Rursumque implebis et fundes sicut prius, sicque facies donec liquefactum æqualiter per omnia plenum sit. Hoc modo reliquas partes compones."

a goat-skin, smoothly fixed upon a wooden table; upon this you polish this electrum until it shines perfectly, so as if one half of it were wet, and one half were dry, no one could distinguish which was the wet, or which the dry part." *

* Quo facto tolle partem ceræ ad longitudinem dimidii pollicis in quam aptabis electrum ita, ut cera ex omni parte sit, per quam tenebis, et fricabis ipsum electrum super lapidem sabuleum æqualem diligenter cum aqua, donec aurum æqualiter appareat per omnia. Deinde super duram cotem et æqualem fricabis partem diutissime donec claritatem accipiat; sicque super eandem cotem saliva humidam fricabis partem lateris, quæ ex antiquis vasculis fractæ inveniuntur, donec saliva spissa et rubea fiat; quam linies super tabulam plumbeam æqualem, super quam leniter fricabis electrum usque cum colores translucidi et clari fiant; rursumque fricabis laterem eum saliva super cotem, et linies super corium hircinum, tabulæ ligneæ æqualiter affixum; super quod polies ipsum electrum donec omnino fulgeat, ita ut si dimidia pars ejus humida fiat et dimidia sicca sit, nullus possit considerare, quæ pars sicca, quæ humida sit."

M. de l'Escalopier, in his translation of the "Diversarum artium schedula" of Theophilus, has translated the word *electrum* by *cabochon*, whenever it occurs in the three chapters 52, 53, and 54 of the third book, we have already quoted. M. de l'Escalopier states in a note, that his study of the text left him to choose between an "incrustation" of enamel or "cabochon," and that he decided upon the latter word, as being more concise: we think he is wrong, conciseness is not necessary in the translation of a work upon the arts and sciences, and before being concise it is necessary to be intelligible; now, in taking the word *electrum* in the sense of *cabochon* the 52nd chapter of Theophilus would be unintelligible. The cabochon, as M. de l'Escalopier himself explains, in a note, p. 286, is a precious stone, which is polished, not cut; whether the cabochon be real or false, it has always the appearance of stone, not cut, but polished, and which consequently does not admit of any graphic representation. If the electrum of Theophilus had been an imitation of cabochon, of what use would be these designs which the maker of this so-called cabochon was to produce by means of strips of gold cut with a rule, and twisted into the requisite form: *opus quodcunque volueris in electris facere, sive circulos, sive nodos, sive aves, sive bestias, sive imagines?* We sometimes meet with engraved stones in intaglio, the incisures of which are filled with gold; but then the stone, if false, is made before being cut and filled with gold; the *electrum* of Theophilus, on the contrary, is first prepared in gold, and afterwards, the vitreous matter, *colores vitri*, the enamel in short, is melted into the interstices of the metal. Besides, the art of cutting stones in bevels (*en biseau*) and in facets is posterior to the XIIth century, and towards the middle of the XIIIth century all stones whether real or false were cabochons. If the *electrum* were a cabochon, it would perform a double office in the work of ornamentation prescribed by Theophilus; it would be, on his part, a repetition of the word *lapis*. But we see in the work of Theophilus three objects constantly applied to the decoration of ecclesiastical utensils, and always united together; thus in chapter xlix., in treating of the fabrication of the golden chalice, he says: "*Si calicem componere volueris et ornare lapidibus et electris atque margaritis.*" In chapter lv. he ornaments the foot of the chalice *lapidibus et electris*, and further on, in the same chapter, *cruces quoque et plenaria . . . cum lapidibus et margaritis atque electris ornabis:* in chapter lii. *ut in primis stet lapis uncis cum quatuor margaritis . . . Deinde electrum, juxta quem lapis . . . rursumque electrum.* The *lapis* of Theophilus being of necessity a cabochon (for we cannot date the period of Theophilus later than the XIIth century), it follows that *electrum* must be some other substance. The cabochon besides is of but one colour; the sapphire blue, the emerald green, the ruby red; the *electrum* of Theophilus, on the contrary, is coloured with many colours. In chapter liii. after having described the manner of arranging with the strips of gold the design the artist intends to represent, and which form the compartments to be coloured, he adds: "*Hauries unum ex coloribus vitri qualem volueris . . . et implebis quemcunque flosculum volueris . . . sicque facies ex singulis coloribus, donec pars una impleatur.*" From a close study of the book of Theophilus, we may conclude that he gave the name *electrum* more particularly to the case of metal prepared to receive the vitreous matter, and containing the designs

Having now explained the process of making the "cloisonné" enamels, we proceed to point out the existing examples with which we are acquainted.

Principal specimens now remaining.

These enamels are very rare; from their having usually been executed upon a groundwork of gold, few escaped the crucible of the goldsmith, when the taste for enamels in the decoration of gold and silver vessels was succeeded by that for engraving, chiselling, or embossing, upon the metal.

A pectoral cross (Fig. 46), formerly in the Debruge-Labarte collection, now in the cabinet of A. B. Hope, Esq., enamelled on both sides by the "cloisonné" process. The style of the subjects represented, as well as the Greek inscriptions, clearly demonstrate its origin; and the form of the letters, combined with the character of the painting, distinguishes it as a piece of ancient workmanship, which we must refer to the Xth or XIth century.

In Paris are to be seen, in the Imperial Library,—

1. The sword, the mantle-plate, and the bees found in 1653, in the tomb of Childeric at Tournay. On the mantle-plate and the chape of the scabbard of the sword, a coarse setting forms a sort of honeycomb work, the interstices of

traced out by the strips of gold; the vitreous substance, in fact the enamel, is according to him, as it is melted, a kind of glass prepared *ad hoc*. "*Accipe omnia genera vitri quod ad hoc opus optaveris.*" He again makes use of the words *colores vitri* to express the different enamels: "*Hauries unum ex coloribus vitri,*" and in chapter xii. of the second book, under the title "De diversis coloribus vitri," he occupies himself with the opaque coloured glasses which enter into the composition of mosaics, and which are real enamels. Chapter xvi. of book ii., in which he treats of vessels of clay decorated with paintings, is entitled, "De vasis fictilibus diversâ coloro vitri pictis," and these glass colours, which would bear the heat of a glass furnace, could be no other than vitreous substances coloured with metallic oxides—true enamels. Also when Theophilus shows in chapter liii. the process of melting the coloured glass enamel into the interstices of the electrum, he gives again to this chapter the title "De electro;" when the enamel is melted and has filled the interstices, the piece thus finished also takes the name of "electrum" (de poliendo electro). Such is, in fact, the title of the chapter in which he shows how to polish the enamel. Theophilus, therefore, applied the word "electrum" to the piece of metal prepared to receive the vitreous substance, and he also gave the same name to the piece, when that substance had adhered to it by fusion. The word *electrum* answers, therefore, completely to the word enamel in the sense in which we understand it, where we apply it to a piece of enamelled metal.

The Tuscans would not have deserved the encomiums bestowed upon them by Theophilus, if they had only known how to make artificial cabochons. It is doubtless because they made those beautiful enamels we have described, which were set in the same manner as precious stones, and alternated with them, that he says in his preface, in addressing his treatise to his pupil: "Quam si diligentius perseruteris, illic invenies... quidquid in electrorum operositate novit Tuscia." M. de L'Escalopier has rendered the word "electrum" by incrustations; that is correct, but the word is too vague; he should have said, "the science of the Tuscans in the fabrication of incrusted enamels."

which are filled with translucid coloured enamels. In the mantle-plate the enamels are set clear.

Fig. 46. Byzantine pectoral Cross.

2. An oblong rectangular vessel, basin, or dish of gold (*plateau*), decorated with a border of lozenges, with trefoils at the angles. The outline of these ornaments is formed by slender lines of filagree gold bent into the form required, and set edgewise upon the plate. These ornaments are filled with a garnet-coloured enamel, bearing much resemblance to that used in the pieces found in the tomb of Childeric. In the centre of the vessel is a cross of similar workmanship. Its use had probably been to hold the cruets containing the wine and water for the service of the mass. This specimen was discovered, a short time back, buried in the earth, near Gourdon, in the department of the Haute-Saône. Gold pieces bearing the effigies of the Greek Emperors, Anastasius I. († 518) and of Justin († 527) were found with it.

3. A manuscript cover recently added to the Imperial Library (MS. Suppl. Latin, No. 1118). Four little "cloisonné" enamels, forming a flower (*fleuron*),* are placed with a precious stone at each angle of the

* Fr. *Fleuron.* An imaginary ornament resembling a flower, with five or six expanded petals, surrounding a projecting centre, like those in the iron crown of the

upper panel of this cover, and serve as corner-pieces to some gold relief very carefully executed. The colours used are opaque, white, light blue, and semi-translucid green. M. Champollion-Figeac, in the description he has given of this manuscript,* thinks the date of the cover to be quite as early as the VIIth century, and considers it of Byzantine workmanship.

4. The rich cover of an Evangeliary of the XIth century, written upon purple vellum, in letters of gold (No. 650, Suppl. Latin). On the upper panel of this cover is a fine slab of ivory, carved in high relief, enclosed in a rich border of gold, consisting of two bands ornamented with pearls and real stones cut *en cabochon*.† And between these two bands are placed on each side five little "plaques" of cloisonné enamel, set in the panel of the cover like precious stones. These enamels, which describe various patterns, have been treated precisely according to the directions of Theophilus, except that they have not the little enamel rim, which was not indispensable to the completeness of the piece. The colours used are opaque red and white, and semi-translucid blue, green, and yellow. All indicate a date nearly contemporaneous with the manuscript, and a later period than the XIIth century cannot well be assigned to it.

Fig. 47. Chalice of St. Remi. XIIth century. Imperial Library, Paris.

5. The chalice of Saint Remi, or St. Remigius (Fig. 47),

Lombards. The rose (*rosace*) is like the fleuron, but composed of an indefinite number of lobes or divisions. This word is also applied to the beautiful roses of Gothic architecture.

* *Revue Archéologique.* 2e année, p. 89.

† Our lapidary's term is "tallow-cut," that is, rounded and polished, in a convex shape, like the modern carbuncle. No stones at this period were cut into facets, all were cabochons. The word cabochon is applied in this treatise to all stones, whether real or false, of this form.

formerly belonging to the cathedral of Rheims. This incomparable work is of pure gold, incrusted with enamels, pearls, and precious stones.* The enamels are arranged in the form of flowers and other pretty ornaments, and are placed round the bowl, the knop, and the foot of the chalice alternately with cabochons. The chalice is of the XIIth century.

6. A circular medallion representing the Crucifixion. The workmanship of this example is very fine; the flesh tints of the figures are in flesh-coloured enamel, and white foliage stands out from the ground, which is of a very deep blue. Light blue, white, and a colourless enamel, are employed in the draperies and accessories. This specimen appears to be of Italian workmanship; the inscription INRI, placed above the Saviour's head, precludes it being Greek; its date may be the XIIIth century.

In the museum of the Louvre is a box overlaid with plates of gold, which must have served to hold a book of prayers. The Crucifixion, in hammered work, upon a plate of gold, occupies the upper panel of the box. This subject, placed under a semi-circular arch, supported by columns, is surrounded by a wide border containing very fine cloisonné enamels. The symbols of the four evangelists are represented upon square slabs at the angles. The eagle and the lion are upon an enamelled ground, the angel and the ox upon the golden groundwork of the piece which is chased out to receive the divisions which form the interior details of the design. The remaining space of the border is ornamented with enamels, and mixed with cabochons. The style of the ornament indicates the beginning of the XIth century.

At Munich, in the library, are to be seen,

1. The cover of an Evangeliary (MS. No. 37) enriched with miniatures, one of which represents the Emperor Henry II. († 1024) and his wife Cunegunda. The upper side of this cover is decorated with a slab of ivory carved in relief, surrounded by a broad border of gold ornamented with cabochons, pearls, and enamels. At the corners are medallions representing the Evangelistic symbols, and between these are twelve others, representing in half-length figures, our Saviour and eleven Apostles. These medallions are all finely executed in

* It is engraved and described in the *Annales archéologiques*, ii. p. 363.

cloisonné enamels. The draperies are in brilliant colours, the flesh tints in rose enamel. The monogram of Christ and the names of the Apostles in Greek characters, are traced out by the thin strips of gold which form the partitions on a level with the enamel. In a fillet surrounding the ivory is an inscription in Roman capital letters, setting forth that this cover was executed by order of Henry II.

2, A rich box in the form of a book-cover, containing an Evangeliary of the XIIth century (MS. No. 35); on the upper side of this cover is a plate of gold in relief representing Christ in the act of giving the benediction. The nimbus, and the alpha and omega, round the head of Christ, are in cloisonné enamel; as are likewise two medallions in the border which surrounds the figure: one represents Christ, the other the Virgin with a Latin inscription. The enamels used are deep and light blue, white, and red; the flesh tints are in pink enamel.

At Vienna, in the Imperial Treasury, are,—

1. The crown of Charlemagne.* (Fig. 49). This crown is composed of eight plates of gold, four large and four small, connected by hinges. The large ones, studded with precious stones, form the front, the back, and the intermediate points of the crown; the small ones placed alternately with these, are ornamented with enamels, representing Solomon; David; King Hezekiah seated on his throne, having before him the prophet Isaiah; and Christ seated between two flaming seraphim, such as the Greeks usually represent them. The costume of the figures resembles that of the Emperors of the Lower Empire, and although the inscriptions which accompany the figures are in Latin, the whole bears the impress of Greek workmanship. The ground of the figures

Fig. 49. Crown of Charlemagne. IXth century. Imperial Treasury, Vienna.

* The crown has been engraved by Villemin, *Mon. fr. inedit.* pl. 19. The description is given in the text by M. Pottier, t. i. p. 13.

is formed by the metal itself, which has been hollowed out to receive the enamel; but all the details of the design are traced out with fine fillets of gold by the process already described. The flesh tints are in rose-coloured enamel; the colours employed in the draperies and accessories are deep and light blue, red, and white. This crown has unquestionably been retouched at various periods, but yet there is nothing to invalidate the tradition which assigns the more ancient portions to the time of Charlemagne. The enamels must belong to the same early period.

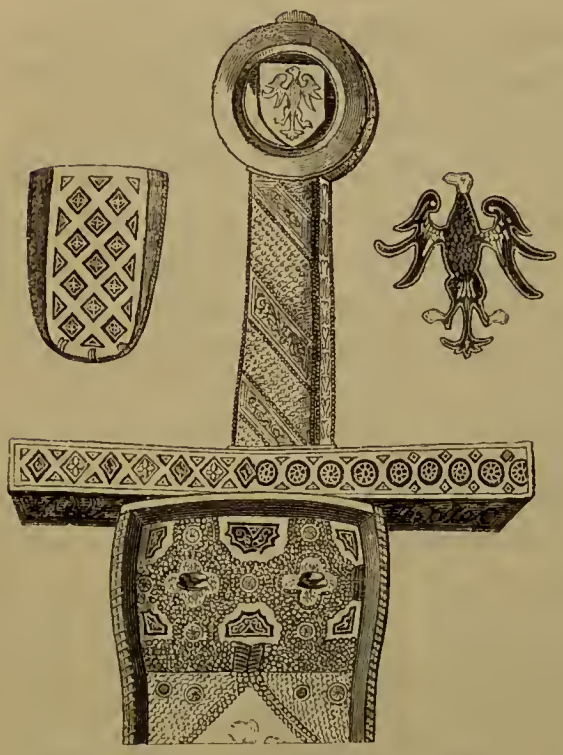


Fig. 50. Sword of Charlemagne. IXth century. Imperial Treasury, Vienna.

2. The sword of Charlemagne. (Fig, 50.) The whole length of the scabbard, which is entirely overlaid with gold, is enriched with a row of lozenges; the uppermost one of which contains an eagle with its wings expanded, the others a variety of ornaments, all executed like the eagle, by the cloisonné or filagree process.

3. The sword said to be that of St. Maurice. The golden scabbard is decorated with figures in hammer-work, separated by ornamental bands of cloisonné enamel. Although the designation given to this sword is questionable, it is evidently of ancient workmanship.

At Venice; the celebrated Pala d'Oro of the Church of St. Mark. It would far exceed our limits to give a full description of this altar front, the most magnificent and most important monument remaining of the mediæval art of enamelling; we must therefore confine ourselves to those points which immediately relate to * the manner of executing the enamels. The exterior outline of the subjects, and

* A beautiful representation of this monument may be seen in M. du Sommerard's work. *Album*, col. plates, xxxii. and xxxiii. of the tenth series.

numerous figures of the table, have been first traced upon a thick sheet of gold, and all the space that was to be filled with the subjects and figures has been deeply hollowed out. In the little cavities thus prepared, all the lines of the design have been formed by small strips of very thin gold, and the enamel melted into the interstices, in the manner explained to us by Theophilus. This may easily be seen by examining the injured parts of the monument. The flesh tints of the figures are rendered by rose-coloured enamel; the other enamels are deep and light blue, green, bright red, reddish brown, and white. The Greek origin of this monument is unquestionable. According to the testimony of all the old historians of the Venetian republic, Pietro Orseolo I., who was elected Doge in 976, restored the edifices burned by the populace, at the time of the assassination of his predecessor Pietro Candiano. For this purpose he sent to Constantinople for architects to build the church of St. Mark,* and, to decorate the High Altar, he commanded the Pala d'Oro to be made by the most skilful artificers of that city. It was not brought to Venice from Constantinople till 1102, in the time of the Doge Ordelafo Faliero, whose portrait was added to it on the occasion.

Cicognara, in his patriotic zeal, claims for Italy the honour of having executed the Pala d'Oro; but greater credit must be given to the testimony of the ancient authors than to that of any modern, and on this point, Morosini, Sabellicus, and Justiniani, all writers of the XVth century, and Sansovino and Tiepolo of the XVIth, leave no room for doubt.†

* "Succeduto poi l'incendio di parte della chiesa e del Palagio Ducale, quando fu dal popolo ucciso Pietro Candiano, da Pietro Orseolo per la redificatione, da Constantinopoli furono chiamati ò più eccellenti architetti che vi fossero, et con molta solemnità restarono, alla presenza del Doge, e di Pietro Malfatto vescovo della città, gettate le fondamenta"—Paolo Morosini, *Historia della città e réplublica di Venetia*, lib. iv. In Venetia, MDCXXXVII. presso Baglioli.

† "Tabulam ad hæc ex auro Bizantii mira arte conflatam eodem intulit: illatamque ad aram maximam solemni dedicatione statuit."—*Antonii Sabellici Rerum Venetarum* etc. Venetis, MCCCCLXXXVII. lib. iv. primæ Dec.

"Pietro Orseolo Doge, che fu l'anno 976, ordinò che fosse questa Pala fabricata a Constantinopoli per l'excellenza degli artifici, che all' hora fiorivano in quell' imperio; e ridotta a perfettione con lunghezza di molti anni per diversi accidenti, fu condotta a Venetia sotto Ordelafo Faliero Doge, che visse l'anno 1102, e collocata su l'altare." —Fran Sansovino, *Venetia città nob. e singolare descritta.* In Venetia, MDCIII. cap. xxxix.

"Tabulam auream ad ornatum magnæ aræ apud Constantinopolim eleganti opere fabricandam curavit."—Justiniani.

Émeric David,* and M. du Sommerard,† have combated the opinion of Cicognara.

It is certain that the Pala has been restored several times, and has at different epochs been enriched with precious stones. Italian artists may therefore have been employed in its restoration, but its most ancient portions, including the enamels, are the work of Greek artists, and as early as the Xth and XIth centuries.

At Cologne, the Shrine of the Magi. (Fig. 51.) The skulls of the three kings are exhibited through a grating placed in

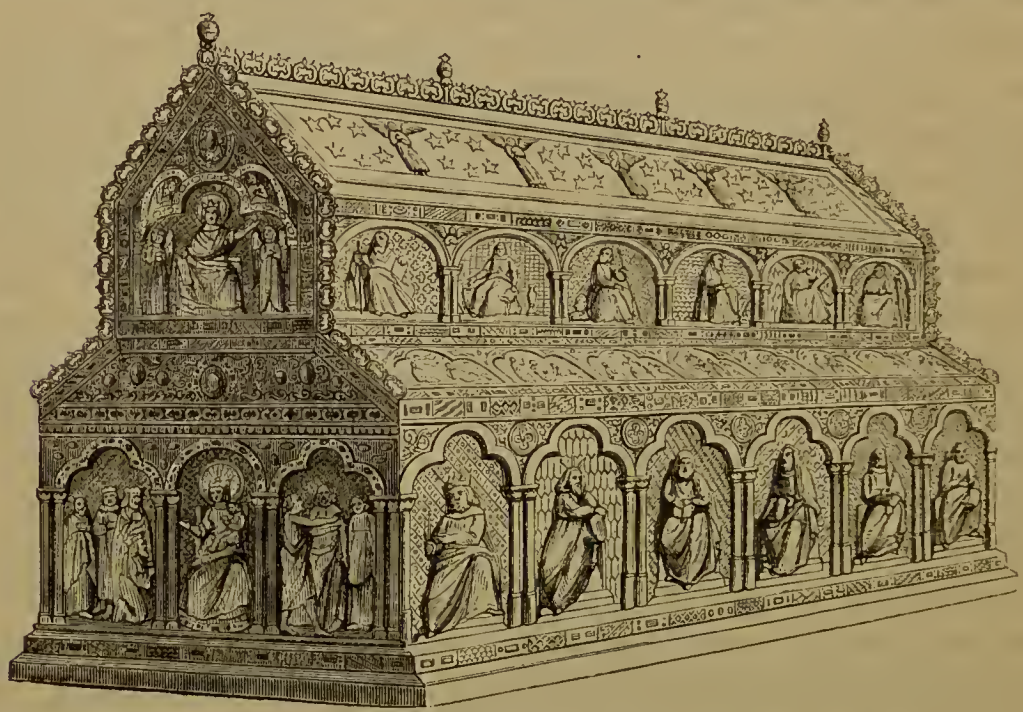


Fig. 51. Shrine of the Magi. Cologne Cathedral.

the front. This front is surrounded by a border of gold decorated alternately with tallow-cut stones, or "cabochons," and enamelled ornaments in gold filagree. This magnificent reliquary was made by order of Archbishop Philip von Heinsberg. It is worthy of observation that upon the longer sides of the monument, each of the trefoil arches of the lower arcade, and each of the semi-circular arches of the upper tier, is cut out of a single plate of metal enriched with champlevé enamels.

At Aix-la-Chapelle: the great shrine of Notre-Dame,

* *Histoire de la peinture.* Paris, 1842, p. 83.
† *Les Arts au moyen âge,* t. iii. pp. 142, 330; t. iv. p. 64.

presented to the cathedral by Frederic Barbarossa, (1152 † 1190). The basement of the monument, the border which surrounds it, and the arches at the angles of the lower tier, are formed by a fillet composed alternately of precious stones and plates of enamel. The spaces to be filled with enamel have been hollowed out upon plates of gold, and the designs traced by the cloisonné process in the little cavities thus prepared.

We have hitherto treated only of enamels upon gold; the cloisonné enamels were also executed upon copper. We shall quote as a specimen of this style a very fine plaque preserved in the collection of the Comte de Pourtalès-Gorgier, which probably is a portion of a book-cover. It represents St. George standing armed with a lance, with which he is transfixing a dragon at his feet; a round shield protects his arm, the saint is attired in the ancient cataphract,* over which is the chlamys clasped upon the shoulder; on the right side of the picture is his horse; several inscriptions in Greek characters are inscribed on the ground. The enamel is $6\frac{1}{4}$ inches wide by $7\frac{1}{2}$ high. The principal outlines of the figures are represented by bands of metal about $\frac{1}{12}$ of an inch wide, the remainder of the design by fine fillets of copper. Some injuries in the piece enable us to perceive that the lines of metal which describe the outline are not fixed to the metal background or plate. The flesh tints are of a tolerably natural colour, the enamels used in the draperies and accessories are of various colours. The enamel is framed in a border of copper hammered out and chased, exhibiting fanciful knots or interlacings in the oriental style, and medallions containing the figures of saints with their names inscribed in Greek letters. The Byzantine origin of this monument admits of no doubt; it appears to belong to the IXth or Xth century.†

To these examples which we have ourselves examined, may be added a jewel of gold preserved in the Ashmolean Museum

* The military habit of the patricians.

† The time that has been allotted to us for the examination of the objects in foreign collections has been too short, and we often have been obliged to rest satisfied with seeing them through a glass. With regard to those in the collections at Paris, at the Imperial Library and the Louvre, we cannot speak in sufficiently grateful terms of the kindness of the curators, who have allowed us to examine them with a glass in the parts that are injured, and to satisfy ourselves of their having been executed according to the processes described by Theophilus.

at Oxford. This jewel was discovered in 1696, near Athelney Abbey, in that part of Somersetshire to which Alfred retreated when worsted by the Danes, A.D. 878. Mr. Albert Way, one of the most learned archæologists of England, has given a description of this piece, accompanied by figures representing the reverse, obverse, and profile of this jewel.* The legend round the edge of the jewel, AELFRED MEC HEHT GEVVRCAN (Alfred ordered me to be wrought), leaves little doubt as to its origin. The enamel placed upon the obverse is traced out by lines of gold filagree, and represents a figure of which it is difficult to determine the character. The face and arms are white, slightly shaded, the colours employed in the draperies are a pale green and reddish brown, both semi-translucent; the ground is blue. The jewel is terminated by the figure of an animal in gold filagree, which is perfectly oriental in its character.

General character of the cloisonné enamels.

An acquaintance with these specimens will enable us now to recapitulate the general characteristics of the cloisonné enamels. These enamels are usually enclosed in a little case of metal, in which the figures are composed of enamel, as is also the background upon which they are represented. In this little case the outline alone is formed of metal, by means of slender lines which are slightly attached by their edges to the plate at the back. But sometimes it is the metal which serves as a groundwork to the picture, and in this case, a portion of the field or plate of the metal, corresponding with the space to be occupied by the figure or subject, has been scooped out or removed (*champlevé*) for the purpose; the lines of the outline being still expressed by very delicate strips of metal inserted in this raised part: of this latter method we have an example in the two corners of the box in the Louvre, before described. The flesh tints are always expressed by enamel, which the artist has endeavoured to assimilate as nearly as possible to the natural colour of flesh. The palette of the Greek enamellers was very rich; the colours they used were white, bright red, brownish red, dark and light blue, green, yellow, violet, flesh colour, and black. White, black, and lapis lazuli blue are

* Archæological Journal. June, 1845, p. 164.

always opaque, the other colours are sometimes opaque, sometimes semi-translucent; yellow is of rare occurrence. Two different tints are never placed in juxtaposition without an intervening slip of metal.

The cloisonné enamels were generally executed upon gold, in pieces of small dimensions, which were then enclosed in a setting or collet, and fixed upon the objects they were destined to ornament, in the same manner as the precious stones with which they were alternately placed. These little plates of enamel having thus been prepared separately, it follows as a natural consequence that they often have been used in the decoration of pieces for which they were not originally made. Thus we find Greek enamels upon French, Italian, and German monuments, and the age of these monuments is not always a true criterion by which to determine the age of the enamels, which are often of more ancient date.

The cloisonné enamels were in great repute, and were employed in the decoration of objects of every description. Theophilus enjoins his cherished pupil, to whom he addresses his "Diversarum artium schedula," to decorate with them all vessels for ecclesiastical use. "You will also decorate crosses and caskets and shrines of holy relics in a similar fashion with stones and pearls."* Swords, crowns, and even vestments were enriched with enamels of this kind; the gloves which formed part of the imperial costume of Charlemagne, preserved in the Treasury at Vienna, are embroidered with pearls, and ornamented with little plates of cloisonné enamel.

Emaux de plique.

It has been seen that pieces enamelled by the filagree process, received from Theophilus, in the XIIth century, the name of "electrum;" we have thought it necessary to enquire what name was given to them in France, to distinguish them from other sorts of enamel. Some expressions used in the old inventories, have led us to think that the cloisonné enamels received, until the end of the XVIth century, the name of "*émaux de plique*," or by corruption, "*de plite*." †

* "Cruces quoque et plenaria et sanctorum pignorum scrinia simili opere cum lapidibus et margaritis utque electris ornabis."—Lib. iii. cap. 56.

† May not the word *plique* be derived from *applicare, appliquer, mettre sur*, because

We find mentioned in the old inventories of the XIVth and XVIth centuries, a small number of enamels designated by these names, and of which the description may apply to the cloisonné enamels. We read in the inventory of the Duke of Normandy, in 1363,* "Une aiguière d'or semée d'esmaulx de plique, de rubis et de menues perles." In the inventory of jewels of Charles V., in 1379,† "Ung calice d'or qui a la tige esmaillée de France et le pommeau semé d'esmaulx de plite—Couppe d'or sur ung hault pié . . . semée d'esmaulx de plite, garnie de grenats et de saphirez.—Couppe d'or toute esmaillée d'esmaulx de plite, et a une annonciation Notre-Dame au fons dedans.—Ung bien grant ymage de Notre-Dame . . . et a une couronne d'esmaulx de plite et de menue pierrerie.—Une seinture . . . et sont la boucle et le mordant d'esmaulx de plite." In the inventory of Charles VI., in 1399,‡ "Une couppe d'or, a tout son couvercle semé par dehors d'esmaux de plite et garnie de rubis d'Alexandre, d'esmeraudes et de perles." And lastly, in the inventory made after the death of Henry II., in 1560,§ "Ung coffre d'argent doré enrichy d' émail de basse taille et de boutons d' email de plique.—Ung bonnet de veloux noir garny de perles et de boutons d' émail de plicque.—Epée à l'antique, ayant la garde, la poignée et le bout d' émail de plique."

Thus we see that "émaux de plique" were only used in general for decorating vases of gold, that they were not incrusted in the metal, but scattered (*semés*) externally over the vases, and consequently could not have been fixed on them except by a collet or setting; they were mixed with precious stones and pearls. Thus we find in these "émaux de plite," all the marks which characterise "cloisonné" enamels, the description given of them in the old inventories would answer equally for the enamels of the chalice in the Imperial Library, or for those which decorate the book-covers we have mentioned, and the gloves of the imperial costume preserved at Vienna.

It is to be observed that these cloisonné enamels, in such

the outlines, in the cloisonné enamels, are formed by strips of gold, applied to the groundwork, or plate, and not by fillets of metal belonging to or chiselled up from the plate itself, as in the champlevé enamels.

* MS. Bibl. roy., fonds Mort., no. 74. † Ibid. no. 8356, fols. 31, 35, 48, 231, 243.

‡ Ibid. fonds Mort., no. 76. § Ibid. no. 9501, 3 Lancel.

general use in the XIIth century, began to be less employed in the XIIIth, and were in the XIVth replaced by translucid enamels upon relief. In the inventories of the XIVth century, the "émaux de plique," are already rare, and occur principally in the decoration of golden chalices, which from their use, would have more easily escaped the crucible of the goldsmith than pieces of household plate. Also, when it is set forth in these inventories that the piece was made by order of the king or prince whose treasure is described, we never find a new piece decorated with "émaux de plique." These enamels, therefore, were no longer made in the XIVth century; and existed only in pieces referred to the latest end of the century preceding. So that all leads to the conclusion that the "émaux de plique" were identical with cloisonné enamels.

Emaux de plique à jour.

In the inventions already quoted, we also find mention made of "émaux de plique à jour." They are thus described:—"Une très belle couppe d'or et très bien ouvrée à esmaulx de plite à jour et est le hanap d'icelle à esmaulx à jour.*—Ung coutel à manche d'ivyre . . . . et a en la lemelle dudit coutel une longue roye à esmaulx de plite ouvrée à jour." †

These "émaux de plique à jour" were nothing more than cloisonné enamels without a background, imitations of transparent stones, which were set clear or melted in the interstices or compartments of a network of gold.

Benvenuto Cellini, in his treatise on the goldsmith's art, relates that Francis I. showed him a beautiful cup, consulting him upon the process employed in its fabrication. From Cellini's description of this cup, we perceive that, like that of the treasurer of Charles V., it was "ouvrée à esmaulx de plite à jour." "The king," writes Cellini, "showed me a drinking cup without a stem, made in filagree, and ornamented with graceful little foliage which sported round the various compartments, and was designed with art; but that which rendered it particularly to be admired, was that all the interstices of the compartments, and those formed by the foliage, were filled by the artist with transparent enamels

* *Inventaire de Charles V.*, fol. 48.

† Ibid. fol. 248.

of different colours."* Cellini goes on to explain in what manner he supposes this kind of work to have been executed. It would be useless to enter here into the details he gives; it is sufficient to observe that little bands of gold formed the different compartments into which enamels were melted. The mantle-plate found in the tomb of Childeric, and the fine cup, in the centre of which is represented Chosroes, king of Persia (531 † 579), both of which are preserved in the Imperial Library, were made by an analogous process, and their enamels are "émaux de plique à jour."

Let us now proceed to *champlevé* enamels. †

Champlevé enamels.

In these as in the cloisonné enamels, a slender line of metal describes on the surface of the enamel the principal outline of the design; but the outline, instead of being arranged separately, and then applied to the plate which is to receive the vitreous matter, is formed out of a portion of the plate itself.

Mode of fabrication.

After having prepared and polished a piece of metal varying in thickness from $\frac{1}{25}$ to $\frac{1}{5}$ of an inch, the artist traced out those parts of it which being kept on a level with the surface of the enamel, were to form the outlines of his subject; then with scalpers he tooled or hollowed out all the spaces to be filled by the different enamels, leaving certain slender lines which served to keep the enamel colours distinct, and to define the principal outline. In the cavities thus prepared he introduced the vitreous matter, either dry and purified, or reduced to the consistency of a paste by means of water or some glutinous liquid. The fusion of this was effected by the process already described in the notice of cloisonné enamels.

Not unfrequently the carnations, and even the whole figure was expressed by the metal, in which case the artist commenced his work by executing in fine engraving the portions reserved for this purpose.

When the piece thus enamelled was cold, it was polished by processes similar to those given by Theophilus in his chapter entitled "De poliendo electro." Then, if the metal excipient was of copper, the lines of metal on the surface of

* B. Cellini, *Tratt. dell' oref.* cap. iii.

† Theophili *Diversarum artium schedula*, lib. iii. cap. xxxvii.

the enamel were gilded, and the piece returned to the fire. This gilding was composed of an amalgam of melted gold and mercury, a moderate temperature only being necessary for fixing it, and the incrustations of enamel sustained no injury from this second exposure in the furnace.*

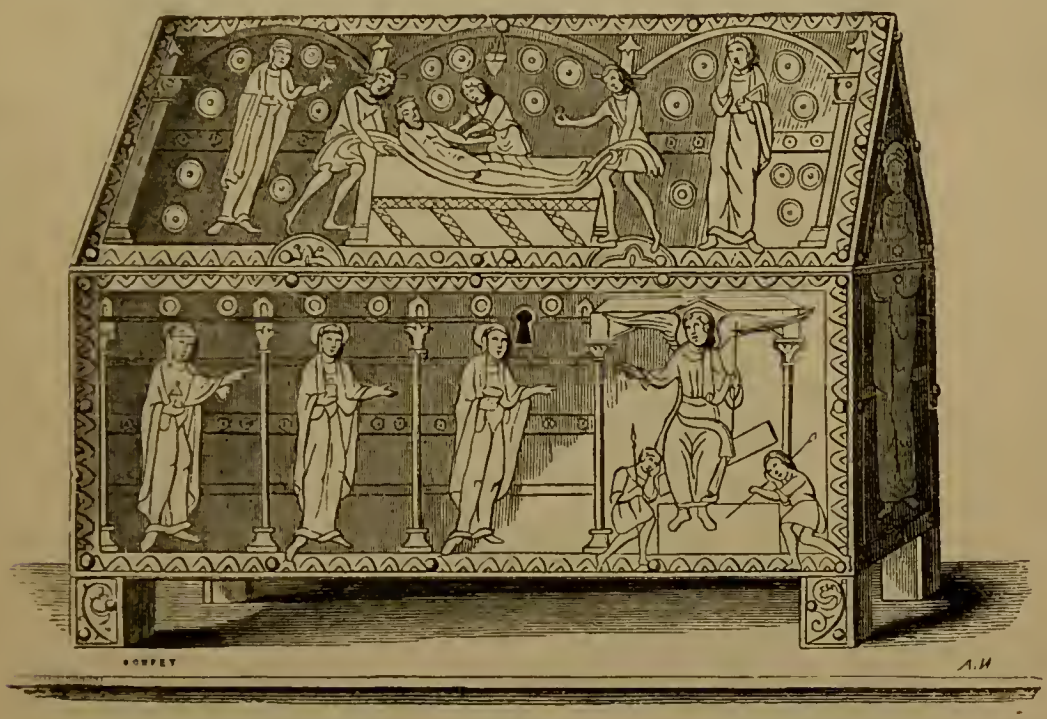


Fig. 52. Shrine. Champlevé enamel. XIIth century. Coll. Soltykoff.

In the Imperial Library at Paris are several pieces of enamel of the Gallo-Roman epoch, found in the north of France, between Evreux and Bavay; they consist of fibulæ and buttons, covered with enamels of opaque red, white, and blue, these two last colours now and then chequered.

Mention of some champlevé enamels.

At the Louvre, the fine cup from the Abbey of Montmajour, near Arles, which bears the name of the maker, Alpais, and that of the town of Limoges, where this skilful artificer worked.—*Magiter* (sic) *G*: *Alpais*: *me*: *Fecit*: *Limovicarum*. Such inscriptions are of rare occurrence. It belongs to the XIIIth century.

At the Musée de Cluny, two plaques of the XIIth century, the one representing the monk Etienne de Muret, founder of

* Consult, upon this subject, the Abbé Texier. *Essai sur les émailleurs de Limoges.* Poitiers, 1843, p. 160, *et seq.*

the order of Grandmont, in conversation with St. Nicholas; the other, its companion, the Adoration of the Magi.

Fig. 53. Portrait of Geoffrey Plantagenet. Champlevé enamel. XIIth century. Museum, Le Mans.

According to the Abbé Texier, these pieces formed a part

of the enamelled altar of Grandmont, sold in 1790 to a brazier for old copper; and we therefore should assign to them the date of 1165, the period of the erection of the altar.* It is at least certain that St. Etienne de Muret established the order of Grandmont in 1073, and was canonised in 1188; and since he is here represented without the nimbus by which saints are distinguished, the enamel must be of a date anterior to his canonisation, and must therefore have been executed between the years 1073 and 1188.

At St. Omer, in the museum, the pedestal, or stand of a cross belonging to the XIth or XIIth century, brought from the Abbey of St. Bertin.†

At Le Mans, in the museum, the full-length portrait of Geoffrey Plantagenet, count of Anjou, †1151 (Fig. 53), father of Henry II. This splendid plaque, measuring about 25 inches by 13, served formerly to ornament the tomb of this prince in the cathedral of the town of Le Mans, and must be of a period near that of his death.‡

At Poitiers, in the museum, a plaque of the Gallo-Roman period, in copper gilt, incrusted with blue enamels. Another specimen, recently found on the top of the Mont de Jouer, near Saint-Goussaud (Creuse) with coins, bearing on the exergue,§ *Philippus Augustus* (244 to 249).‖

At Vienna, in the Imperial Cabinet of Medals and Antiques, among several fine Roman pieces, two large plaques. On the one which has served the purpose of ornamenting the cover of a book, Christ is represented in the act of benediction; near his head are an alpha and omega, disfigured by a kind of appendage by which they are surmounted. The other represents the Crucifixion; above the cross the hand of God the Father issues from a cloud to bless His crucified Son.

In England, the fine vase discovered in 1834, in a Roman sepulchre in Essex. (Fig. 54.) It is described by Mr. Gage in the 26th volume of the Archæologia.

* Abbé Texier, *Essai sur les émailleurs de Limoges*, 1843, p. 72.
† *Album* of M. Du Sommerard, 2d series, pl. xxviii.
‡ Ibid. 10th series, pl. xii.
§ *Exergue.* A little space around or out of the work or figures of a medal, left for the inscription, cipher, device, date, &c.
‖ Abbé Texier, *Essai*, &c., p. 16.

The golden ring of Ethelwulf, king of Wessex, (836 † 857), preserved in the British Museum.* (Fig. 55.)

Fig. 54. Essex Vase found in the Bartlow Hills, and destroyed by fire at Little Easton, Lord Maynard's.

The fine crosier published by Villemin as belonging to Ragenfroi, bishop of Chartres († 960). This remarkable work of art, which is now in the collection of Sir Samuel Meyrick, at Goodrich Court, is inscribed with the words—FRATER WILLIELMUS ME FECIT. The opinions which attribute it to Ragenfroi would refer the date of its construction to the middle of the Xth century; but this an examination of the pieces renders quite untenable. M. André Pottier in his learned description of this crosier, directs attention to the fact that Goliath, as represented in one of the compartments of the knop is habited in the armour of the warriors of

Fig. 55. Golden ring of Ethelwulf, King of Wessex. IXth century. British Museum.

* Archaeological Journal, June, 1845.

the XIth century. He discovers also in the foliage with which the piece is decorated, an evident resemblance to a similar ornament which Villemin has engraved in the same plate from a Greek manuscript. M. Andrien de Longperier, in an excellent article upon enamel,* observes that the costumes and attitudes of the persons represented are precisely similar to those in the Bayeux tapestry, and that even the inscription bears a close analogy to those in the embroidery of Queen Matilda. Mr. Albert Way, who has been able to examine the specimen more closely, does not assign to it an earlier date than the XIIth century.† We may add to the observations of these learned archæologists, that in the draperies of the numerous personages represented on the knop of the crosier, we see different tints of enamel placed together without being separated by slips of gold, an arrangement never met with in enamels of the XIth century. We cannot therefore make use of this example to prove the existence of champlevé enamels in the Xth century.

General character of champlevé enamels.

We may now recapitulate the general characters of the champlevé enamels, as follows :—They are almost always executed upon copper, the cheapness of the material admitting the use of plates of large size; these enamels are not like the cloisonné enamels attached as ornaments to pieces of jewellery or plate, but are mostly, on the contrary, complete works of art in themselves, and owing to the depth of the sculpture and the thickness of the enamel, possess great solidity, and are durable in their colours. The vitreous matter is employed in two ways; sometimes it gives the colours to the carnations or flesh tints, the draperies, and the ground, and in that case the metal which touches the surface, serves merely to trace the principal outlines of the design; at other times it is employed to colour nothing but the ground, and to form a border round the figures of gilded metal, which are either expressed by fine engraving on the plate, or are chiseled in bas-relief.

Without going so far as to assert that the enamels of the former class have not been executed later than the XIIth

* *Cabinet de l'antiquaire*, t. i. p. 149.
† Archæological Journal, June, 1845.

century, we may state as certain that the practice of representing the flesh tints by enamel approaching to the natural colour, and of using colours in the draperies, is peculiar to the XIth and XIIth centuries, and that it sufficiently authenticates enamels of that epoch. A proof of it may be seen in the portrait of Geoffrey Plantagenet, and the plaques of the Musée de Cluny, obtained from the altar of Grandmont, the date of which is beyond dispute.

This manner of tinting the flesh tints is attributable to the influence of the Græco-Venetian artists, who, as we shall see further on, settled at Limoges in the XIth century, and of this we find a proof, in the fact that no enamel of which the workmanship is undoubtedly Greek, is executed in any other manner. We may cite as examples the enamels already mentioned, which decorate the Pala d'Oro of St. Mark at Venice, those belonging to the book-cover of the manuscript at Munich, which was executed by order of the Emperor Henry II., the plaque in the possession of the Comte de Pourtalès, and the pectoral cross now in Mr. Hope's collection. In all these a flesh-coloured enamel is used for the flesh tints, and various colours for the draperies.

When the figure was very minute, the enamellers of the XIth and XIIth centuries expressed the carnations by lines incised on the gilded metal; the draperies are then coloured by enamels, as we see in the cross of St. Bertin at St. Omer. Or lastly, if the whole of the little figures be expressed by an engraving on the metal ground, the incisures are always, in this case, filled with enamel.

The second manner of disposing the enamels, which consists in employing it only for giving colour to the ground, was that almost exclusively adopted in the XIIIth and XIVth centuries; it is difficult to meet with enamels of this period in which the figures are expressed otherwise than by fine engraving on the gilded metal, or else by reliefs upon the enamelled ground, which is nearly always of a brilliant blue. The evident progress made in the art of drawing in the XIIIth century, was doubtless the principal cause of this alteration in the process.

The art of enamelling by incrustation lost much by the change; as soon as the enameller, confined to the work of

colouring the back-ground, became a mere auxiliary to the graver, he lost his position as an artist, and descended to that of a machine. The facility of executing works of this description occasioned their production, which led to the depreciation, and eventually the extinction of this fine art.

The succession of colours employed in the champlevé enamels, is thus given by the Abbé Texier in his "Essai sur les émailleurs de Limoges," and we cannot do better than repeat the observations of this learned archæologist. In the XIth century, the enamels used are blue, subdivided into three shades of blackish blue, sky blue, and light blue; semi-translucid purplish red, opaque, bright red, green approaching to blue, light green. The enamel used between two strips of metal is always of a uniform colour.

In the XIIth century, the enamel has a fine grain; and violet and iron-gray are added to the colours of the century preceding. However small the space between the strips of metal, the enameller sought to imitate by a juxtaposition of

Fig. 56. Enamelled châsse, representing the Virgin and Child and Apostles. XIIth century. British Museum.

tints the degradation of tone which forms the model in other paintings. Green always separates blue from yellow; the

light tones of the green draperies are formed by yellow enamel, the half tints by green; in the blue draperies, the degradation of colour is from deep blue to light blue and white.

In the XIIIth and XIVth centuries, the same enamel colours are employed, but as in most of the specimens of the period the figures are incised on the metal, or executed in bas-relief, the enamel serving only to colour the back-ground, blue becomes the prevailing colour.

Different application of champlevé enamels.

Enamels incrusted by the champlevé process, were profusely applied during four centuries, from the XIth to the XIVth, to a variety of copper objects and utensils, of which the value was enhanced by this cheap kind of ornamentation. They were used more especially for ecclesiastical purposes, and particularly for enriching the shrines (Fig. 56) which enclosed the bones of saints and martyrs. Even monuments of a larger size, such as tombs and altars, were also overlaid with enamels. It does not admit of doubt that many articles of domestic use were likewise decorated in this manner; a proof of this occurs in an ancient text we shall presently have occasion to quote, but of these very few have escaped destruction. M. Carraud possesses, in his collection, a series of plaques of the XIth century, which ornamented a military belt, representing chimeræ in the best style of art. Some caskets and pricket candlesticks (*flambeaux à pointe*),* are still to be met with in the museums and private collections. (Fig. 57.)

Relative antiquity and origin of the champlevé and cloisonné enamels.

Having now fully described the process of fabrication, and marked the distinctive characters of the two kinds of incrusted enamels, having also pointed out some of the specimens which afford matter for discussion, let us now endeavour to throw light upon, if we cannot solve, the questions that arise with regard to their origin and their relative antiquity.

The most ancient written document extant, in which allusion may be made to enamelled incrustations upon a metallic excipient, is a passage of Philostratus, who, in his "Treatise

* The parts of a candlestick are the foot, the stem, the knop, (placed about the middle of the stem for the convenience of lifting,) the bowl, and the pricket, on which the taper is fixed.

upon images," in speaking of harness, enriched with gold, precious stones, and various colours, adds these words, "It is said that the barbarians living near the ocean pour colours upon heated brass, so that these adhere and become like stone, and preserve the design represented." *

Fig. 57. Candlestick, Champlevé enamel. XIIIth century. British Museum.

Philostratus, a Greek by birth, after having taught rhetoric at Athens, established himself at Rome, at the wish of the Empress Julia, wife of Septimus Severus, in the early part of the third century. If the art of enamelling metals had then existed in Greece, his own country, or at Rome where he resided, Philostratus would not have cited this kind of ornamentation as something extraordinary, nor would he, above all, have ascribed to "Barbarians" the honour of its invention. On the other hand, the existing enamelled specimens of the Gallo-Roman period, as for instance the pieces in the Imperial Library, the one in the Museum at Poitiers, and the vase found in Essex, agree perfectly with the narrative of this writer, as regards the material of their composition, and the localities in which they have been discovered.

It may therefore be considered as established, that the art of enamelling upon metals had no existence in either Greece or Italy at the beginning of the IIIrd century of the Christian era; and moroever, that this art was practised in the industrial cities of western Gaul.

* Ταῦτα φασὶ τὰ χρώματα τοὺς ἐν Ὠκεανῷ Βαρβάρους ἐγχεῖν τῷ χαλκῷ διαπύρῳ, τὰ δὲ συνίστασθαι καὶ λιθοῦσθαι καὶ σώζειν α ἐγράφη.—*Icon.* lib. I. cap. xxviii. *Philostr.*, quæ supersunt omnia, etc. Gottefrid Olearius. Lipsiæ, 1709, p. 804.

During the invasions and wars which, almost without interruption, desolated the West from the IVth to the XIth century, almost all the industrial arts languished, and some may even have been entirely lost. We may infer that the art of enamelling was of this number, and there exists no document during this long period to show the practice of the art of enamelling in France; and the only works which occur as land-marks in the dreary space between the Gallo-Roman period from the XIth century, are the ring of Ethelwulf, (Fig. 55), preserved in the British Museum, and another ring of gold mentioned by Mr. Albert Way,* which being inscribed with the name of Alhstan, may be considered as having belonged to the bishop of Sherborne of that name († 867), who was the chief counsellor of Ethelwulf. The enamel in these two rings serves as back-ground to some chased figures, having been applied in the champlevé cavities of the metal. These two pieces, which belong to the goldsmith's art, are not of sufficient importance to establish the existence of enamelling in the west in the IXth century.

The sword and jewels found in the tomb of Childeric, at Tournay, have often been cited as enamelled works belonging to the French period; but it is to be remarked, that these are not executed by the champlevé process, which was from the very beginning a distinctive character, but on the contrary, by the cloisonné process peculiar to the Greek artists of the Gallo-Roman enamels. The mantle-plate which forms a part of these jewels, and of which the enamels are translucent and set clear, is also executed in the same manner as the fine oriental cup of the Imperial Library, presenting compartments filled with translucent enamels, and bearing the effigy of Chosroes, King of Persia (531 † 579). The form of the scabbard has nothing in common with what we know of the sword of the Franks at that epoch, and if due attention be paid to the fact, that by the side of these objects in the same tomb were found a hundred gold coins of the emperors of the Lower Empire, most of whom were contemporaries of Childeric, we may reasonably infer, that the sword and the jewels enriched with cloisonné enamels, were, as well as the coins, productions of Byzantine art, and sent

* Archaeological Journal. June, 1845, p. 163.

as presents to the father of Clovis. The recent discovery of the plateau of gold enriched with a border and cross of enamel, adds strength to this opinion, the enamelled decoration of this piece being treated in the same manner as that of the objects found in the tomb of Childeric; and this also was found buried accompanied by some coins of the Lower Empire. This identity of workmanship, and of coins found in connexion with these specimens can leave us little doubt of the oneness of their origin, which must be oriental. The supposition of friendly relations between the emperors of the East and the early Frank kings, is by no means gratuitous, since we know that the Emperor Anastasius I. sent to Clovis a golden crown, which that prince presented to the basilica of St. Peter, during the pontificate of Symmachus.*

While the art of enamelling was slumbering in the Western Empire, it had taken root in Constantinople, and was coming into notice in Italy. This fact is first made known to us by a passage in the life of Basil the Macedonian, written by the Emperor Constantine Porphyrogenitus, his grandson, who reigned from 911 to 959. After giving a tedious description of an oratory (εὐκτήριος οἶκος) that Basil had caused to be built in his palace at Constantinople, and for the decoration of which gold, silver, precious stones, and pearls, had been profusely employed, the author adds, "in this same oratory is to be seen also executed in enamel, in many places, the image of our Lord, the God-man." †

Basil the Macedonian, had occupied the imperial throne of

* *Chronique de Gauthier*, quoted by M. de Sommerard, t. ii. p. 2.

† Ἐν ᾗ κατὰ πολλὰ μέρη καὶ ἡ θεανδρικὴ τοῦ Κυρίου μορφὴ μετὰ ΧΥΜΕΥΣΕΩΣ ἐκτετύπωται."—Constantin. Porph. *Vita Basilii Maced.*, cap. lxxxvi. *Script. post Theophan.* p. 203. Edit. Paris.

Émeric David, in his *Histoire de la peinture du moyen âge*, (p. 78, ed. 1842,) had mentioned the fact, without any quotation of the text, which he translates thus: "On y voyait en divers endroits l'image de Jesus Christ *peinte* en émail sur metal." It is evident that É. David has translated badly in rendering ἐκτετύπωται by *peinte*. Ἐκτυπόω signifies to make an impression, to fashion, form, mould; it conveys, therefore, the idea of representing an object by modelling, engraving, or by any sort of manipulation; but this word cannot be made to bear any application to painting; and, indeed, the Greek works were not painted, but incrusted by fusion, in the interstices of a metallic excipient. Painting in enamel colours upon a metallic excipient was not practised till the end of the XIVth century or the beginning of the XVth; and painting upon an enamelled ground, with vitreous colours, dates only from the end of the XVth., as we shall see later. As to the translation of the word χύμευσις by enamel, which É. David had already admitted, it does not appear to us to

the East from 868 to 886, therefore towards the middle of the XIth century the art of enamelling was in its zenith at Byzantium, and consequently must have existed in that city for some time.

Of what description were these enamels which rivalled painting, the emperor's account does not inform us; Constantine is not like Theophilus, an artist to explain the processes of the arts, he writes as an historian; he wishes to show the manificence of his grandfather, and his end is attained by a simple statement of facts.

The Greek enamels were cloisonné.

But monuments exist to explain to us what the Byzantines understood by painting on enamel. Let any one examine the enamels we have pointed out, and of which the authenticity as Greek is unquestionable; viz., those of the cover of the manuscript in the Imperial Library (Suppl. Latin., No. 1118), which our learned antiquary, M. Champollion-Figeac, refers to the VIIth century; those adorning the crown and sword of Charlemagne, of the end of the VIIIth century; the great enamel of the Comte de Pourtalès, the little cross of Mr. Hope, the Pala d'Oro of St. Mark, which was ordered at Constantinople in the Xth century and executed in the XIth; the cover of the Evangeliary of Munich, executed by order of St. Henry in the first year of the XIth century, and of which the enamels may be of even earlier date; every one of these enamels will be found to belong to the first division, that is to those made by the cloisonné process; the designs are not limited to the mere ornamental patterns, but represent for the most part figures and subjects; and in all, the carnations and draperies are expressed by enamel colours. Here then are enamels which

offer any difficulty. Χύμευσις strictly means a mixture, a compound; M. Alexandre, in his Greek and French dictionary, renders the word by "amalgam." This enamel, employed in incrustations, what is it, but a mixture of glass and coloured metallic oxides? Besides which, χύμευσις must be derived from χυμός, which gives the idea of a glutinous liquid. The root of the word is χέω, which signifies to pour, or melt. The word χύμευσις represents to us then a compound of various substances reduced to a paste, and subjected to fusion, conditions which apply perfectly to enamel. Now, if we refer to the account in which Constantine Porphyrogenitus has made use of the word χύμευσις, we find that after having exhausted the enumeration of all the decorative materials, gold, silver, precious stones, and pearls, with which this magnificent oratory of his grandfather was ornamented, he proceeds to say that there was also to be seen there the divino-human form of the Lord, figured in χύμευσις. We really do not know what else this substance could have been the name of which expresses a fused amalgam, unless it be enamel.

may truly vie with paintings, so that certainly it must have been enamels of this kind which decorated the oratory of Basil the Macedonian.

We find at the time that this enemy to iconoclasm was restoring with magnificence the images of the Saviour in the churches of Constantinople, Italy also possessed some enamelled works. This we learn from Anastasius Bibliotheccarius in his "Lives of the Popes." Thus we read in his life of Leo IV., († 855):—"S. Leo tabulam de smalto opus CCXVI auri obrizi pensantem libras."* In that of Benedict III., his successor:—"In Basilica B. Pauli apostoli isdem antistes sanctus Benedictus presul pulcherrimi decoris rete factum miro opere totam cx gemmis alvaberis et bullis aureis conclusas auripetias in se habens smaltitas, posuit;" † and in that of Stephen V. († 891):—"Posuit cantharum auream unam cum pretiosis margaritis et gemmis ac smalto;" ‡ and further on—"Pro reverentiâ et amore eorumdem sanctorum obtulit crucem auream super altare cum gemmis et smalto." §

These enamels, were they in the style of those which Basil the Macedonian had caused to be executed?—were they of Greek or Italian workmanship? Anastasius, who, in 869, had attended the eighth general council at Constantinople, and seen there the splendid monuments raised by this restorer of images, would probably have been able to tell us, but this was a question of art foreign to his subject. We can only therefore have recourse to conjecture, and yet we think we can solve the question.

If the art of enamelling had not yet been naturalised in Italy, at the time of Anastasius, the enamels that he cites were Greek, and consequently executed by the cloisonne process. Had they been of Italian manufacture, they would still have been made in the same manner. Theophilus, who has made known to us the skill of the Tuscan artists in the fabrication of enamels, leaves no doubt upon this point. Besides, in the descriptions of Anastasius, as in that of Theophilus, we find enamels in conjunction with precious stones: "Cantharum auream cum margaritis gemmis ac smalto."—"Crucem cum gemmis et smalto." There appears

* *Liber Pontificalis, seu de Gestis Rom. Pont.* quem . . . emendavit et supplevit Vignolius. Romæ, 1724, t. III, p. 87.

† Ibid. p. 165. ‡ Ibid. p. 269. § Ibid. p. 272.

then a perfect identity between the enamels of Anastasius and those of Theophilus. This brings us to the inquiry as to whether the Greeks or the Italians were the first to practise the art of painting in enamel. Anastasius, who has made us acquainted with the existence of enamels in Italy in the middle of the IXth century, having given us no information as to whence these enamels came, contributes nothing towards the solution of the question, and the "Diversarum artium schedula" of Theophilus stands alone in informing us that the Tuscans excelled in this work. But this book of Theophilus cannot, in our opinion, be earlier than the XIIth century, and the only inference to be drawn from it is that in the XIIth century, or perhaps the XIth, the Tuscans made cloisonné enamels.

It is to the Greeks that we owe the introduction into Europe of cloisonné enamels.

In favour of the Greeks, on the contrary, we have a proof in the narrative of Constantine Porphyrogenitus, that the art of enamelling was in all its splendour at Constantinople in the IXth century, and we further possess specimens of Byzantine workmanship of even an earlier date.

Moreover, it was at Constantinople that the Doge Orseolo ordered, at the end of the Xth century, the Pala d'Oro for the high altar of St. Mark, and the emperor, St. Henry, employed, in the beginning of the XIth century, Greek artists to decorate with enamels the covers of his books of prayers; from these circumstances we are led to infer that the art of enamelling was not cultivated in Italy at the end of the Xth century, or at least that it had not then attained that degree of perfection which called forth, later, the eulogium of Theophilus.

Thus everything leads to the belief that it is at Constantinople, and in other industrial towns of the eastern empire, that the art of enamelling was developed; and the Tuscans, at a later period, imported the knowledge of it from Greece.

We have stated that the narrative of Philostratus, confirmed also by existing monuments, appears to establish the fact that the Gauls had practised, from the IIIrd century, the art of enamelling upon metals, while as yet that art was unknown to the Greeks: might it then be from Gaul that the latter received the art?

Where did the Greeks learn the artistic process of cloisonné enamel?

On looking at the specimens of Byzantine workmanship, we cannot hesitate to decide that there is no relationship whatever between the enamels of the West and those of Greece. The process of fabrication is, as we have seen, entirely dissimilar; but there is one remarkable resemblance, it is that the cloisonné enamels of the Greeks are treated by processes absolutely identical with those employed by the people of Asia, who, from time immemorial, had been versed in the practice of all the arts, while the nations of Europe were still plunged in barbarism. Thus the Chinese, Hindoo, and Persian enamels, incrusted in the metal, are all executed by the cloisonné process; some of ancient workmanship are found champlevé. May we not then reasonably conclude that the Greeks, so often brought into contact with the Persians either by means of war or commerce, received from Asia this beautiful art of enamelling metals, which, after the suppression of the iconoclastic heresy, would make rapid progress at Byzantium?

The taste for cloisonné enamels upon gold maintained itself in Italy, France, and Germany until about the end of the XIIth century. The enamels which decorate the chalice of St. Remi at Rheims, and those of the shrine presented by Frederic Barbarossa (1152 † 1190) to the cathedral of Aix-la-Chapelle, are made by this process. The shrine of the Magi at Cologne, the construction of which must be dated at the end of the XIIth century or the first years of the XIIIth, affords examples of both kinds of enamel, cloisonné and champlevé; but the shrine of Charlemagne given in the XIIIth century by Frederic II. († 1250) to the cathedral of Aix-la-Chapelle, is decorated with champlevé enamels only. This brings us back to enamels of this latter kind. The traces of the occidental enamellers, while scarcely perceptible in the IXth century, disappear completely in the Xth. The wars and troubles of every description which at that epoch desolated the countries that Charlemagne had united under his sceptre, were undoubtedly the principal cause of the state of suffering of the industrial arts. But when, in the XIth century, France had been, in some measure, restored to tranquillity, when princes, bishops, and people set to work to

Revival of enamelling in Aquitaine in the XIth century.

rebuild the ruined churches and to erect new ones, the ornamental arts were put in requisition to aid in the restoration and embellishment of their ecclesiastical furniture.

It was at this time apparently (the beginning of XIth century) that the art of enamelling metals by the champlevé process reappeared in Aquitaine,* and made rapid progress in the course of a few years. Limoges became the head-quarters of a manufacture, of which productions were sought after, not only in France but in England, Germany, and even in Italy, where the works of the Greeks were more generally spread.†

Limoges the centre of the manufacture of enamel.

Limoges was a Roman colony; its reputation for the works of the goldsmith's art may be traced to a high antiquity, and it may be presumed to have been one of those industrial cities of western Gaul where enamels were made in the time of Philostratus. Whether this be the case or not, it is certain that it was celebrated for the works of its goldsmiths as early as in the reign of king Dagobert. The Abbé Texier has proved by a host of documents, the fruit of the most laborious researches, that an uninterrupted succession of goldsmiths had flourished at Limoges, and that even in the Xth century this city had produced some remarkable specimens of their art.‡

Yet this learned archæologist, though occupied above all other considerations with the glory of his native country, has not instanced one example of enamel bearing a date, or positive indication that can place its execution prior to the XIth century.

The first enamelled monument cited by him, is the tomb of St. Front, at Périgueux. From a writing in the Bibliotheca of Labbé, we find that in the time of Guillaume de Montbron, in 1077, the sepulchre of St. Front was admirably sculptured by the monk Guinamundus, of the abbey of the Chaise-Dieu, § and the red book of the commune of Périgueux describes this tomb as being enriched with laminæ of copper, gilded and enamelled. ‖ This documentary evidence is supported by a very choice specimen in the collec-

* The county of Périgueux and the viscounty of Lessinges were then fiefs of the duchy of Aquitaine.

† Ugello, *Italia sacra*, t. vii. p. 1274.

‡ *Essai sur les émailleurs et argentiers de Limoges.* Poitiers, 1843, p. 41, *et seq.*

§ Labbé, *Biblioth. Nov. MSS.* Aquit. ‖ Abbé Texier, *Essai*, &c., p. 63.

tion of the Abbé Texier: it is a fragment of a shrine, ornamented by blue incrustations and with rosettes (*rosaces*)* of various colours, which serve as a ground to the figure of a saint engraved upon the plate of copper and nielloed with enamel. On his left, the letters being arranged in a perpendicular line, is the inscription: FR. (frater) GUINAMUNDUS. ME. FECIT. The characters, to judge by their form, belong to the XIth century, and the style of the figure, as well as of the ornaments, is Byzantine or Byzantino-Venetian.

From the XIIth century, the enamellers of the Limoges schools acquired great celebrity, of which we have irrefragable proofs in remarkable specimens of certain date, and in numerous written documents. In the inventories of church furniture and in ancient charters, we often find mention made of caskets, shrines, crosiers, and other works enamelled at Limoges, which are thus designated in barbarous Latin: "de opere Limovicense; opus de Limogia; de opere Limovitico." Du Cange † produces several quotations of this kind made from charters of the years 1197, 1231, 1240. He gives particularly a document thus framed. "L'an 1317, au 11 juillet, envoya M. Hugues d'Angeron au roi, par Guiart de Pontoise un chanfrain doré à deux testes de liéparts de l'œuvre de Limoges à deux crestes, pour envoir au roi d'Arménie."

In 1218, Pierre de Nemours, bishop of Paris, gives to the church of la Chapelle at Brie, *coffros Limovicenses*.‡

In the inventory of Foulques, bishop of Toulouse, who died in 1231, we find the following article: "Item in alio confinio sunt duo baccini qui sunt de opere Limovitico." §

Carpentier ‖ gives the will of Guillaume de Harie, in the year 1327, in which we read: "Item je lais 800 livres pour faire deux tombes hautes et levées de l'œuvre de Limoges, l'une pour moi, l'autre pour Blanche d'Avanger, ma chère compaigne."

In the XIVth century, mention is made of some vases of Limoges in the inventory of the plate of Humbert II. ¶

* *Rosacc.* Large rose, rosette (Millin).
† *Glossarium ad scriptores mediæ et infimæ latinitatis.* Vo. Limogia.
‡ *Gallia christiana*, i. 412.
§ Catel, *Hist. du Languedoc*, p. 901.
‖ *Glossarium novum.* Vo. Limogia.
¶ *Hist. du Dauphiné*, quoted by M. Monteil.

It was not in France alone that the works of Limoges were so highly esteemed, they were, as we have before stated, sought after in foreign countries. A deed of gift, made in 1197, to the church of St. Maria at Veglia, in Apulia, mentions "duas tabulas æneas superauratas de labore Limogiæ." *

Mr. Albert Way, in the number already quoted of the Archaeological Journal, gives several important documents, extracted from ancient deeds preserved in the libraries of England. Thus, among the gifts of Gilbert de Glanville, bishop of Rochester, († 1214) are enumerated "cofres de Limoges." In the visitation book of William, dean of Salisbury, A.D. 1220, we find mentioned, as existing at Wokingham, Berkshire, "cruces processionales de opere Limovicensi." In the constitutions of the bishops of Worcester, Walter de Bleys, A.D. 1229, and Walter de Cantilupe, A.D. 1240, respecting the ornaments and vessels to be provided for every parish church, it is ordained that the Eucharist be kept in a pyx of either silver or ivory, or of the work of Limoges, "de opere Lemovitico." The most curious of all the documents cited by Mr. Albert Way is a manuscript of Anthony Wood's collection in the Bodleian library at Oxford from which we learn that an artist of Limoges, "Magister Johannes Limovicensis," was employed to construct the tomb and recumbent effigy of Walter de Merton, bishop of Rochester. We find detailed in the manuscript, the accounts of the testamentary executors, giving the items of the expenses incurred, by sending a messenger to Limoges, the price of the monument, and conveying it from Limoges, accompanied by Master John, to Rochester.†

This curious monument was despoiled of its enamelled metal at the Reformation, but there still exists in England, an evidence of the high repute in which the enamelled work

* *Italia sacra*, vii. 1274.

† This curious document, preserved amongst Anthony Wood's MSS., Bibl. Bodl. Cod. Ballard, 46, gives the following details :—

"Computant (executores) xl. li. vs. vj. d. liberat' Magistro Johanni Limovicensi pro tumbâ dicti Episcopi Roffensis; scilicet, pro constructione et carriagio de Lymoges ad Roffam; et xls. viijd. cuidam executori apud Lymoges ad ordinandum et providendum constructionem dicto tumbe; et xs viijd. cuidam garcioni eunti apud Lymoges querenti dictam tumbam constructam et ducenti eam cum dicto Magistro Johanne usque Roffam."—Thorpe *Custum. Roff.*, 193.

of Limoges was held, in the effigy of William de Valence, († 1129) in Westminster Abbey. There can be no doubt that this curious portraiture, if not the work of Master John, who might have been employed in consequence of the previous display of his skill at Rochester, was produced by an artist of Limoges.

In the face of all the existing examples and the numerous documents which support them, how can it be doubted that Limoges was from the XIth to the XIIIth century, the focus whence emanated all these beautiful specimens of enamelled copper which are still so much admired and so eagerly sought after for museums and collections? Moreover, when we find the works of Limoges scattered all over Europe, and the workmen of this city brought at a great expense from France to erect monuments of their art, does it not appear sufficiently demonstrated that from Limoges issued the enamellers, who, during the XIIIth century or later, established in other countries manufactures of copper enamel.

Besides, few specimens of this kind occur in England or in Germany; Italy has none. Those preserved at Vienna, in the Imperial Cabinet of Medals and Antiques, are designated in the catalogue as Byzantine; * those of the Chamber of Arts at Berlin, as works of Limoges; † no town of either Great Britain or Germany claiming the honour of having produced workmen in this department of art.

On the other hand, our task would be endless if we had to enumerate all the specimens of champlevé enamel to be seen in France. Notwithstanding the various causes which, at different epochs, in the course of five centuries, occasioned the destruction or perversion from their original use, of a great number of enamelled objects contained in the treasuries of the churches, there are still at the present day very few parishes of the old provinces of Poitou, Limousin, and La Marche, that does not possess some valuable remains of this art. The Abbé Texier has enumerated more than 250 reliquaries still existing in the churches of the Vienne, Haute-Vienne, Creuse and Corrèze. ‡

* J. Arnett. *Das K. K. Münz-und-Antiken-Kabinet.* Vien. 1845. S. 50.
† Leopold v. Ledebur, *Leitfaden für die König. Kunstkammer zu Berlin.* Berlin. 1844. S. 41. ‡ Work before quoted, p. 165.

Limoges enamels have, for many centuries, been considered as Byzantine.

Be that as it may, it is only within these last forty years that to Limoges has been restored the credit of a manufacture which constituted her chief glory from the XIth century to the end of the mediæval age. D'Agincourt, in his "Histoire de l'Art," when speaking of the enamels of Limoges, merely cites a painting by Nouailher, belonging to a period when the art was on the decline,* and when, under the title of "bronze émaillé," † he describes two plates of incrusted enamel which he found at Rome, in private collections, he is unable to give any information as to whence they came.

According to all appearance, the taste for enamels incrusted upon copper by the champlevé process, did not last beyond the end of the XIVth century; the manufacture would consequently cease at that period, and the Limoges enamellers would adopt some other method of using their enamel. The tradition of a manufactory of incrusted enamels having formerly existed at Limoges, was in course of time forgotten, and for two centuries the shrines, the crosiers, and all other objects for ecclesiastical use that the Limousin artists had so abundantly produced, were regarded as Byzantine.

Nor was this without some show of reason, for the Byzantine style displayed itself almost exclusively in the Limousin enamels of the XIth and XIIth centuries, and the enamellers resisted even longer than any other artists, the invasion of a new taste which affected, at the end of this century, a revolution in the arts.

Independently of the general causes that led to the establishment of the Byzantine style in France, and principally in the provinces of the south, in the XIth century, particular causes contributed to its prevalence at Limoges. Venice having received with favour the Greek artists expelled from the empire by the iconoclastic persecution, the Byzantine style obtained a footing in that city; and when after the cessation of the iconoclastic war, Grecian art, in the Xth century, burst forth again in all its splendour, it was still to the imperial city that Venice sent for artists to construct her finest monuments. The Byzantine style prevailed, therefore,

* *Histoire de l'art*, t. ii. p. 142. † Ibid. p. 145.

at Venice, when towards the end of the Xth century a number of her industrious citizens established themselves at Limoges, and built a suburb to the town. B. de Saint Amable, in his "Histoire de Saint Martial," * thus expresses himself: "Il y avoit autrefois à Limoges une rue nommée Vénitienne † et cette rue et son fauburg étaient habités par des marchands vénitiens; ce qui commença l'an 979. Et ce qui obligea les Venitiens de bâtir ce faubourg et de ce loger à Limoges, fut à cause du commerce des épiceries et étoffes du Levant qu'ils faisaient venir sur leurs navires, par la voie d'Egypte, à Marseille, et conduire par voiture à Limoges, où ils avaient établi en grand magasin d'où une bonne partie du royaume tirait ce qui lui faisait besoin."

The importance of this establishment is attested, according to the Abbé Texier,‡ by a host of facts, and by documents which he refers to; more especially by a deed of the beginning of the XIth century, recorded by Nadaud in a manuscript history of the Abbey of Saint-Martial-lez-Limoges,§ by which Gerald de Tulle, abbot of this abbey, agrees to furnish, in perpetuity, three pounds of pepper to Gerard bishop of Angoulême, which, adds Nadaud, was easy to him, "le comptoir des Vénitiens touchant à son monastére."

An important fact lends its aid in support of these documents. The Doge Orseolo, the same who had ordered at Constantinople the celebrated Pala d'Oro, having abdicated his office in 978, established himself in France with four noble Venetians, and lived there, having assumed the habit of a monk, until 997.‖

M. du Sommerard attributes to this cause the Venetian establishment at Limoges, for the Doge Orseolo being a great patron of the arts, would, he thinks, be accompanied by skilful Græco-Venetian artists, who would give a great impulse to the school of that place. ¶

The admitted fact of Venetians being residents at Limoges in the next century, gives every probability to this conjecture of the learned archæologist. According to him, the name of Alpais, inscribed upon the fine cup preserved in the Museum

* Ibid. p. 372.
† There is still a street so called at Limoges.
‡ Work before quoted, p. 30.
§ *Bibl. du séminaire de Limoges.*
‖ Sansovino, *Venetia città nobilissima descritta.* In Venetia, MDCIIII. p. 368.
¶ *Les arts au moyen âge*, t. iii. pp. 143, 288, 380.

of the Louvre, is Greek,* and goes far to establish that Byzantine artists still worked at Limoges at the beginning of the XIIIth century.

But the Græco-Venetian artists, though they opened a vast field to the productions of the Limousin enamelling, and impressed on it the style of the Greek school, introduced no change in the process of fabrication belonging to the occidental enamellers, and in use from the epoch of the Roman dominion. It is only by some rare attempts at filagree work employed in little borders, and ornaments, that they show they had not forgotten the process peculiar to the enamels of their own. An example of this is afforded us in the bordering of a little plate, representing Abraham and Melchisedec, to be seen in the Museum of the Louvre.

What distinguishes the Greek from the Limoges enamels.

But while thus admitting the justice of restoring to Limoges the greater number of these champlevé enamels affecting the Byzantine character, many antiquarians are still of opinion that along with these productions, of which the Limousin origin is demonstrated, we may meet with others evidently Greek obtained by the same process. The Abbé Texier has suggested that the characteristic difference between the liturgy of the Greeks and Latins must be traceable in the works of art produced by the two churches, and assist us to distinguish the pieces of direct Byzantine origin. "Thus," says he, "the benediction is not given in the Greek church as in the Latin with the thumb and the two fingers extended;† the

* M. Dussieux, in his *Recherches sur l'histoire de l'émail*, p. 49, said, in opposition to the opinion of M. du Sommerard, that the name Alpais is French. The Abbé Texier, who is a native of the Limousin, asserts (work before quoted, p. 83) that no name bearing any resemblance in sound is known among the ancient Limousin appellations, and that he could find no denomination approaching to it among the five or six thousand names of persons mentioned in the *Histoire du province du Limousin.*

† The mode of giving the benediction differs in the two churches. In the Greek, it is given with the forefinger open to form an I, the middle finger curved like a C, the ancient Sigma of the Greeks, the thumb and annulary crossed form an X, and the little finger curved represents a C. All this gives IC—XC, the Greek monogram of Jesus Christ (IHCOYC XPICTOC); thus, as the author of the *Guide of Painting* of Mount Athos observes, "By the Divine providence of the Creator, the fingers of the hand of man, be they more or less long, are arranged so as to form the name of Christ."

The Latin benediction is more simple, being made with the annulary and little finger closed, the three first fingers open, symbolical of the Trinity.

Formerly, bishops and priests blessed alike; latterly, bishops reserved to themselves the right of blessing with their fingers, the priest with the open hand; the

crosier of the Greek bishops is not, like that of the Latins,* terminated by a pedum; the Greeks inscribed generally upon the nimbus which decorates the head of divine personages, three letters forming the words ὁ ὢν, and lastly, the inscriptions which accompany the subjects are in Greek characters." All this is very true, but the Abbé Texier does not cite a single example executed by the champlevé process, upon which these characters are to be found which bears indisputably the stamp of a Greek origin.

With regard to the inscriptions, he might except that which is placed upon the scroll or label above the head of our Saviour on the cross: ΤΗΣ.—ΧΡΙΣ (Ιησοῦς-Χριστοῦς) this having been adopted by all countries and at all periods. The same may be said of the Greek letters A and Ω, the "principium et finis" of the Latins. We can also readily conceive that the Greek artists established at Limoges may have introduced some Greek letters into the enamels which they executed. But beyond this, an attentive examination of the works in champlevé enamel on which we find some signs belonging to Greek symbolism, will soon convince us that these have been executed under the influence and direction of the Western Church. Thus M. Adrien de Longperier † when pointing out in a description he has given of sundry specimens of enamel, a little medallion in the Museum of the Louvre, representing Christ with the two letters A and Ω, very justly observes, that the form of these letters betrays an origin foreign to Greece.

The champlevé enamels in the Imperial Cabinet of Antiques at Vienna, are all marked in the catalogue as Byzantine. In one, the head of Christ is accompanied by the A and the Ω; but we have remarked that these letters are ill-formed; they show an artist entirely ignorant of the Greek alphabet, who has executed them from memory, and that clumsily. Besides, Christ is blessing after the Latin

bishops facing the congregation, the priests in profile, with the hand placed edgeways. The sign of the cross was formerly made with three fingers open, but now with the open hand, from the forehead to the breast, and from the left to the right shoulder by the Latins, but from the right to the left by the Greeks.—Didron, *Iconographie Chrétienne.*

* The crosier of the patriarchs in Greek bishops, is generally surmounted by a globe, or terminated by two serpents, forming upon the top a kind of tau (T).

† *Cabinet de l'amateur et de l'antiquaire*, t. i. p. 153.

manner, the thumb and the two fingers raised, and assuredly, at Constantinople, in the XIIth century, they would not have thus represented the benediction. In another enamel of the

58. Enamelled plate representing Henry of Blois, Bishop of Winchester, and brother of King Stephen. XIIth century. British Museum.

some collection, the hand of God the Father extended from a cloud, is giving the benediction in like manner according to the usage of the Latin church. Moreover there is no perceptible difference between these enamels and the productions of Limoges.

We may therefore conclude, from the evidence that we have analysed, that an enamel made in Greece by the champlevé process would be an exception to the rule, and the individual work of some artist * who had frequented the schools of

* In the treasury of the cathedral at Bamberg, are two reliquaries, in the form of coffers, with flat covers, in champlevé enamels; one of these, said to have been presented by the emperor, Henry II., does not appear to belong to the school of Limoges, and bears evidently the stamp of Greek art. The figures, nevertheless, are engraved upon the ground of the gilded metal, but they are very small.

Limoges; and in short, that the well-marked distinction between the Limousin productions, and those of Greek art, consists in the very different mode of fabrication; the Greek and Italian being executed by the cloisonné, the enamels of Limoges by the champlevé process.

Were champlevé enamels made out of the Limousin.

We do not go so far as to assert that champlevé enamels were never made except at Limoges. Enamellers of the Limousin school may have been called to other countries to exercise their art. There is reason to believe, for instance, that a school of enamel was established in the XIIIth century, in some town in the ancient bishoprics of Cologne, Trêves, or Mayence, as we find in the provinces bordering the Rhine, which formerly were fiefs of these sovereign bishops, a considerable number of shrines and other ecclesiastical implements enamelled upon copper by the champlevé process. Although the execution of these enamels is identical with that of the Limousin specimens, they bear nevertheless a certain appearance which enables the practised eye to distinguish the one from the other. (Fig. 58.)

We have a specimen in the royal church of St. Denis of these Rhenish enamels—an altar-piece in copper-gilt executed in hammer-work, which had a few years back been bought in Rhenish Prussia, was placed upon the altar at the end of the apsis. The figures represented in this altar-piece have nimbi in enamel, enriched with fine ornaments in metal produced by the Limousin process; it is nevertheless easy to recognise, in inspecting the work, that it is due entirely to German art.

We have seen that the Italians executed, during the middle ages, some cloisonné enamels of which the process of fabrication had apparently been transmitted by the Greeks. It is probable that they did not produce any champlevé enamels, strictly so called, in the style of the enamels of Limoges. It is true we often meet, upon specimens of metal work, a style of ornamentation which has all the appearance of the champlevé enamels, but which differs from them essentially. These consist in figures or ornaments engraved upon silver and executed in niello work, on a background of opaque blue enamel. There are a great many examples of this kind, as,

for instance, the silver altar at Pistoia, and others upon that of the Baptistery of St. John, of which we shall speak further in treating of the goldsmith's art. Setting aside the metal employed and the style of the figures, these enamels present, at first sight, a great analogy with the Limousin enamels of the XIIIth and XIVth centuries, in which the figures are expressed upon the metal by a fine engraving, the background alone being enamelled. But in examining closely these enamels upon silver, in the places more especially where they have suffered injury, we find that the metal has not been chiselled out deeply, as in the champlevé enamels; that it has, on the contrary, been scarcely scooped to a thickness equal to that of three or four sheets of paper, and that the enamels which cover the space thus slightly depressed, have been laid on according to the process adopted for translucid enamels in relief, which, according to all appearance, immediately followed in Italy the discontinuance of cloisonné enamels.

§ II. TRANSLUCID ENAMELS UPON RELIEF.

The paintings in incrusted enamels had all the faults of the early mosaic; the same stiffness of outline, either absence or crudity of shading, want of perspective and parallelism of the figures, which were either isolated or placed upon a single line. The brilliancy of their imperishable colours was insufficient to atone for these faults in the eyes of the great Italian artists, who, during the second half of the XIIIth century, shook off the Byzantine yoke, and struck out into new paths of art. Without giving up the use of enamel, which, by the brilliancy and durability of its colours, was eminently calculated for the decoration of works of the goldsmith, they sought to employ it in another manner, and to adapt it to the productions of their genius.

Causes which gave birth to enamels upon relief.

On the other hand, the immense riches of the clergy and the progressive increase of luxury, occasioned, in the XIVth century, the almost exclusive adoption of gold and silver for all vessels for sacred use, and the plate of the nobility. The sacred vessels, monstrances,* and reliquaries, were now made

* Monstrance, from the Latin *monstro* (to show), Fr. *Ostensoir*. A vessel, or transparent pyx, in which the consecrated wafer is exposed to the adoration of the

of these costly materials only; and the altars were overlaid with bas-reliefs richly chased in gold and silver. The dressoirs * and tables of the nobility were covered with vessels of every description.

Enamel work by incrustation, which required plates of metal of considerable thickness, did not meet the exigences of the goldsmith, who, in multiplying the number, diminished of necessity the weight of the objects he produced.

Such were doubtless the different causes which brought about, in Italy as well as in France, a change in the manner of applying enamels. The incrustations of enamel upon vessels of gold and silver were replaced by fine chasings, the ornaments and subjects selected by the artists; the surface of these was afterwards coloured by fine translucid enamels of most brilliant hues, and so incorporated with the chasing as to give to the whole the appearance of a finished painting reflecting a metallic lustre.

Process of fabrication.

The process was as follows: on a plate of gold or silver, often very thin, the artist marked out by an incisure, formed to receive the enamel, the outline of the space that the part to be enamelled was to fill; then, with very delicate tools, he engraved on it the figure or subject he wished to represent; the more prominent parts of the flesh and draperies then presented a very slight relief, and the lines of the face were often only expressed by engraving.

In the beginning of the XIVth century, when, in the hands of the most skilful artists the art of enamelling was brought to perfection, the plate was prepared in a different

congregation. It is made of glass or crystal; the usual form of modern monstrances, is circular, surrounded by metal rays like a sun, but in mediæval examples it is to be seen in every variety of beautiful form.

* The *dressoir* or *dressouer*, the *buffet* of the XVth century, the *évidence* of the XVIth—the *dresser* now degraded to the kitchen, was once the principal object in the dining-room. On it were exhibited all the ornamental plate of the owner of the house, vases enriched with precious stones, and of the finest design, Majolica and Palissy dishes, &c. It was placed either opposite the dining-table, or at the back or side of the dais. Kings often had three dressers, one for silver, another for silver gilt, and the third for gold plate. In form they varied, sometimes resembling the modern dresser, at others like a square table, with steps at the top (*en gradins*), which were covered with coloured cloth. The dressers were made of the most valuable woods, and enriched with the finest carving. They were sometimes covered over with cloth of gold; the city of Orleans offered one in gold to the emperor Charles IV. which was valued at 8000 livres Tournois.

manner, and, we learn from Benvenuto Cellini, in his "Trattato dell' Oreficeria," this new mode of operation.

Technical processes of enamels upon relief according to B. Cellini.

The plate of gold or silver was fixed by heat upon a stucco composed of pitch and ground brick mixed with a little wax. After that, having traced with a compass the outline of the space to be filled, all that part of the plate was depressed to a depth corresponding with the thickness which was judged suitable for the enamel. The artist then drew upon this depressed portion the subject to be represented, and afterwards, with very fine tools, engraved it in relief to a thickness equal to that of two sheets of paper.*

Cellini also gives, in the greatest detail, the best methods of preparing the enamels and of applying them upon the engraving; we shall copy from him that which is most interesting to complete our knowledge of the technical processes of enamels on relief.

The different enamel colours were first of all to be pulverised in water, freed from grease and washed. The water was then to be carefully pressed out, for, in this kind of work, it was needful the enamels should be as dry as possible.† These directions having been attended to, the artist was then to proceed to enamel the bas-relief, and taking the enamels, with a little copper spatula, he was to apply them gradually, in a thin layer, upon the surface, distributing the various colours with taste.‡

Cellini remommends particular care in the spreading of this first layer, which the enamellers termed the first skin

* "Si dee faro una piastra d'oro o d'argento alquanto grossetta . . . o questa si appicca sopra uno stucco, che si fa di pece greca e matton pesto, sottilmente incorporato con un poco di cera . . . Appiccasi poi il detto stucco sopra una stecca; . . . indi si piglia la detta piastra scaldandola, e dopo che sia calda, si appicca sopra la detta pece. Ciò fatto signisi un profilo con un paio di seste piccole . . . e poi si abbassi tutta la delta piastra, appunto, quanto ha da essere la grossezza delto smalto con molta diligenza. Come si sara ridotta la piastra in tal termine, desegnivisi tutto quello, che si vuole intagliare . . . et tutte si intagli col bulino e colle ciappolette con diligenza grande. Debbesi faro il lavoro di basso rilievo della grossezza di due fogli di carta ordinaria, intagliato con ferri sottili." B. Cellini, *Trattato dell' Oreficeria.* Milano, 1811, p. 45.

† "Quanto più asciutti si terranno, tanto più bolla diverrà l'opera." P. 48.

‡ "Fatte le dette diligenze, si potrà comminciare a smaltar l'opera di basso rilievo . . . Pilinsi adunque con una palettina di rame piccola gli smalti e quegli si distendano a poco a poco sottilissimamente sopra l'opera, un vaghezza compartendo la varietà de' colori degli smalti." Pp. 49, 50.

(*prima pelle*), that the colours should not run into one another, but have the appearance of a miniature.*

Next, the piece being placed upon a plate of iron, might be taken to the fire, but in doing so, care was to be taken to approach the furnace very gradually, that so the enamel might be heated by degrees. When sufficiently warm, it was to be placed in the middle of the furnace, taking great precaution to observe the instant the enamel begins to move, so as not to be allowed to run. It was then to be withdrawn from the furnace, and allowed to cool gradually.† Another layer of enamel was then laid on as lightly as the preceding one, and the piece again carried back to the furnace, from which, as before, it was again withdrawn as soon as the enamel began to fuse.

When the piece was cooled, the enamel was reduced in thickness until it was of a sufficient transparency, by means of a stone called by the Italians *frasinalla*, the same that Theophilus calls *cos*; it was then polished with tripoli. ‡

An extensive variety of colours was used in this kind of enamel. We find greens, pinks, reds, violets, grays, blacks, several kinds of brown and light blue. White and lapis-lazuli blue, which are always opaque, are not used; and as the flesh colour must always be based on a white enamel, which also gives opacity, the flesh tints in these enamels upon relief are expressed by the metal ground itself, seen through either a colourless enamel, or one slightly tinged with violet.

Mention of some enamels upon relief.

Translucid enamels upon relief, are not so rare as the cloisonné enamels, but as the utensils of domestic life which were decorated with them have been destroyed through change of fashion, these enamels are most frequently to be found in the treasuries of churches, upon consecrated vessels, or reliquaries, which have owed their preservation to their sacred character. The pieces

* "La prima volta, che s' impone lo smalto, si domanda dar la prima pelle, la quale si pone sottilmente e con gran diligenza; perciocchè bisogna proccurare di mettere la diversità de' colori nettissimamente e in tal guisa, che paiono miniati, e non che un colore si sparga nell' altro." B. Cellini, p. 50.

† "Avendo grandissima avvertenza, come lo smalto comincia a muovere di non lasciarlo scorrere affatto, ma cavar l'opera fuori del fornello e trattenerla a poco a poco, acciochè ella non si freddi a un tratto." P. 51.

‡ "Cio fatto, abbiansi apparecchiate di quelle pietre frassinelle, . . . e con quelle si assottigli tanto lo smalto, quanto si vegga a bastanza trasparente e che mostri bene, indi si finisca di pulire col tripolo." P. 52.

enriched by them are the work of the period comprehended between the first years of the XIVth century and the end of the XVIth. Thus to cite one example alone, we will instance the treasury of the cathedral of Aix-la-Chapelle, which contains the girdle of the Virgin, another given by Charles V., and that presented by Philip II., all enriched with translucid enamels upon relief.

One of the best preserved and most delicate specimens of the enamel chiseling of the Italian masters is a small triptych which formerly belonged to Mary Stuart, and is now in the Riche Chapelle of the palace of the King of Bavaria.

In the Museum of the Louvre, are eight pieces of great beauty enamelled on gold, that have doubtless been detached from some reliquary now destroyed. One represents the Saviour, his head encircled with a triple tiara; on his right hand is a saint (Charlemagne?) crowned with a royal crown, holding the globe and the sword, and on his left St. John. Another, to all appearance its companion, represents the Virgin between two saints. In these two pieces, the figures, which are half-length, are placed under architectural decorations. The style of the workmanship indicates a French original and the close of the XIVth century.

In the collection of M. Dugué, of Paris, is a fine crosier in copper gilt, enriched with translucid enamels upon a most exquisite chasing. This crosier bears the date of 1531, and as we learn from the inscription, was made for the abbot of a convent at Bâle.

We have already stated the causes which appear to us to explain the change that took place in the manner of applying enamel to the representation of figures. Existing documents trace this revolution in the art of enamelling to Nicholas of Pisa, and yet more to John, his son and pupil. John, who was at the same time, an architect and a sculptor, exerted great influence over all the artists of his time, and gave a new direction to all the arts applied to modelling. It is easy to conceive that an artist of such merit, when he wished to make enamelling subservient to the decoration of his works, would not rest satisfied with the flat paintings of the filagree enamels of the Byzantines.

This kind of enamel originated in Italy.

In 1286, John of Pisa was brought by the bishop Guglielmino Ubertini to Arezzo, when his palace was being built after the designs of Margaritone. According to Vasari, John executed for the high altar, a group representing the Virgin and Infant Saviour, between St. Gregory and St. Donatus or Donato, and enriched his work with enamels upon plates of silver.* This is the first mention we find of enamel being used for colouring reliefs in silver.

John had taken as associates in his works the brothers Agostino and Agnolo, his pupils, two young men, natives of Sienna.† These became distinguished artists; they had many scholars through whom they diffused the principles of their master. Among these, must be placed in the first rank, Pietro and Paolo, goldsmiths of Arezzo, who were the first artists in chasing of their time. Among their works, must especially be mentioned, a head in silver, of the size of life, enriched with enamelled chasings, which they made by order of an arch-presbyter of the parish church of Arezzo, for the purpose of containing the head of San Donato. ‡

Forzore, son of Spinello of Arezzo, a pupil of Maestro Cione, one of the first goldsmiths of his time, distinguished himself later as an enameller upon chasing in silver.§ Vasari cites, as his work, the mitre and crozier of the bishop of Arezzo, which were enriched with subjects in enamel.

Among the best enamellers in this style may be mentioned Bartoluccio Ghiberti, a celebrated goldsmith who flourished at the beginning of the XVth century, if we may judge of

* "L'anno poi 1236,... Giovanni fu condotta da Siena in Arezzo dove fece in marmo la tavola dell'altar maggiore, tutta piena d'intagli, di figure, di foliami, ed altri ornamenti, compertando per tutto l'opera alcune cose di musaico sottile, e smalti posti sopra piastre d'argento."—G. Vasari, *Vite de' più eccellenti pittori, scultori,* &c., in the lives of Nicola e Giov. Pisani. Ed. Livorno, 1767, t. i. p. 273.

† G. Vasari. *Life of Agostino and Agnolo.*

‡ "Piero e Paolo orefici Aretini, furono i primi che di cesello lavorarono opere grandi di qualche bontà; perciocche per un arciprete della pieve d'Arezzo condussero una testa d'argento grande quanto il vivo, nella quale fu messa la testa di San Donato vescovo, la quale opera non fu se non lodevole, si per che in esso fecero alcune figure smaltate assai belle ed altri ornamenti, o si poichè fu delle prime cose, che fossero, come si è detto, lavorate di cesello."—G. Vasari, nella vita di Agostino, t. i. p. 344.

§ "Forzore di Spinello Aretino lavorò d'ogni cesellamento benissimo, ma in particolare fu eccellente in fare storie d'argento a fuoco smaltate come ne fanno fede nel vescovado d'Arezzo una mitra con fregiature bellissime di smalti, ed un pastorale d'argento bellissimo. Lavorò il medesimo al cardinale Galeotto da Pietramala molte argenterie." G. Vasari, in the lives of Agostino ed Agnolo, t. i. p. 345.

the merits of the master from the ability of his pupil, Antonio Pollaiuolo,* who obtained a high reputation in the art of enamelling upon gold and silver. After having worked under the direction of Lorenzo Ghiberti at the ornaments of the celebrated gates of the Baptistery of St. John, at Florence, Pollaiuolo left that great artist to follow the occupation of a goldsmith. It was in his chasings coloured with enamel that he principally distinguished himself. "The most delicate pencil," says Vasari, "could not have finished them more exquisitely."† He formed a great number of pupils, among the most distinguished of whom was Giovanni Turini of Sienna.‡ Pollaiuolo died in 1498 at a very advanced age.

Francisco Francia, a contemporary of Pollaiuolo,§ and afterwards a celebrated painter, was originally a goldsmith, and excelled in the art of engraving metals and enamelling upon silver. He surpassed every one, says Vasari, in all that can be performed in this art.‖

We find at the beginning of the XVIth century, Ambrogio Foppa, a native of Milan, who became celebrated under the name of Caradosso, and who has been cited by Cellini as the most celebrated enameller of his time.¶

Cellini also mentions Amerigo Amerighi, Michelagnolo da Pinzidimonte, and Salvador Pilli, as having been excellent enamellers.* *

We cannot better terminate our list of Italian enamellers, than by naming Benvenuto Cellini himself, who in his Treatise upon the goldsmith's art, describes to us the processes employed by these artists to tint their fine and delicate chasings with the brilliant colours of translucid enamels.

It was probably in the first years of the XIVth century

* "Pose Antonio (il padre) all arto dell' orefice con Bartoluccio Ghiberti maestro allora molto eccellenti in tale esercizio. Antonio dunque tirato innanzi da Bartoluccio oltra il legare le gioje, e lavorare a fuoco smalti d'argento, era tenuto il più valente che maneggiasse ferri in quell' arte."—G. Vasari, t. ii. p. 431.

† "Sono alcune paci in san Giovanni bellissime che di colorito a fuoco sono di sorte, che con penello si potrebbono poco migliorare."—G. Vasari, in the life of Pollaiuolo.

‡ G. Vasari. t. ii. p. 433. § Born 1450.

‖ "Lavorò di smalto ancora molte cose d'argento, che andarono male nella rovina e cacciata de' Bentivogli. E per dirlo in una parola, lavorò egli qualunque cosa può far quell arte, meglio che altri facessero giammai."—G. Vasari, *Life of Francesco Francia.*

¶ B. Cellini. *Tratt. dell' Oreficeria*, p. 54.

* * Ibid. *Tratt. dell' Oreficeria*, proemio, pp. 57, 58, 59.

that this mode of applying enamels was transmitted from Italy to France.

The manufacture of enamelling upon gold established at Montpellier, of which Dom Vaissete makes mention in his "Histoire du Languedoc," * has been often cited, without any inquiry as to what might be the kind of enamelling produced at that manufactory. But if we examine the narrative of this historian, and the causes which gave rise to the ordinance of Philip the Long, a copy of which is given in the work referred to, we cannot fail to be convinced that the productions of Montpellier were no other than translucid enamels upon relief.

Introduction of this method of enamelling into France.

The case is this, Philip the Fair († 1314), had transferred to the old part of Montpellier, the royal mint, which had formerly been placed at Sommières. In the new town, which was in the demesne of Don Sancho, king of Majorca and lord of Montpellier, there had been established a manufacture of enamelling upon gold and silver. We have seen, by the description given of the preparation of the metal plate chased to receive the enamel, that if these plates were made round, they might before their slight relief had been coated with enamel, have precisely the appearance of pieces of money, which, at that period, were far from being executed with the skill of modern times. On the other hand, there would be among these moneyers, chasers to engrave the dies of the royal coins, and these artists might probably compete with the enamellers in engraving little plates which might afterwards be easily covered with translucid enamels.

The king of Majorca, therefore, complained to the king of France, alleging "que la monnaie faisait du tort à la manufacture d' émail en or et en argent établie dans la partie de Montpellier qui était de son domaine, et qu'il ne pouvait punir les monnayeurs qui délinquaient dans cette partie, à cause de leurs privilèges."

Upon this request, Philip the Long issued in June letters patent, 1317, by which, having first declared that he alone possessed the right of having a mint at Montpellier, he orders the Seneschal de Beaucaire "de ne pas traverser

* *Histoire generale du Languedoc*, par un religieux de la congregation de Saint Maur. Paris, 1741, t. iv. p. 107.

l'ouvrage en émail qui se fabriquait dans la partie de cette ville qui appartenait au roi de Majorque, mais seulement l'ouvrage en or."

A plate of gold and silver, prepared for enamelling by the champlevé process, bears no resemblance whatever to a piece of money; a painting in enamel upon a plate of gold which in this case serves only the same office as canvas or wood in ordinary painting, could not in any way have excited the competition of the workers at the mint. The manufactory of Montpellier must therefore have been one of translucid enamels upon relief, the art of which, known for many years in Italy, would be first introduced into the south of France.

This kind of enamelling was highly esteemed in France and Flanders. Cellini mentions the skill of the enamellers of these countries, remarking also that they owed much to their study of the works of this description by Italian artists.*

This kind of enamelling much in fashion in the XIVth century in France and in Flanders.

We do not require this testimony to prove that this kind of enamelling had been carried to great perfection in France. We have instanced already the fine enamels of this class to be seen in the Museum of the Louvre, undoubtedly of French workmanship. Additional proofs are afforded us in the inventories of the French kings and princes of the XIVth century, though the monuments referred to are themselves lost.

Thus, in the inventory of the jewels of the Duke of Anjou, dated 1360,† in that of the duke of Normandy, in 1363,‡ in the inventory of the furniture and jewels of King Charles V., in 1379,§ in that made by order of Charles VI., in 1399,‖ we find mention of a considerable quantity of sacred vessels of plate, and utensils of gold and silver of every description, enriched with enamels representing figures and subjects, sometimes very complicated, almost always grotesque, unless they ornament objects designed for sacred use. We give the description of some of these pieces treated in enamel, which will serve to show the taste of the time:—"Deux

* B. Cellini, *Tratt. dell' Oreficeria*, p. 44.
† MS. Bibl. roy., suppl. français, no. 1278.
‡ MS. Bibl. roy., no. 2053, fonds mort. no. 74.
§ Ibid. no. 8356.
‖ Ibid. no. 2068, fonds mort, no. 76.

bacins d'argent dorés pareils, et ont chascun un esmail au fons, fait en manie d' une rose, et a es feuilles d' ieelles hommes qui ont le eorps de bestes sauvages, et en l'esmail du milieu de la rose l'un, a une femne qui ieue (joue) d' un sattérion, et en l' autre, a une femne qui ieue d' une vielle."*

"Un hanap † couvert sans pié, an fond du dit hanap est un esmail d' azur, et audit esmail a un homme à eheval qui est d' un chastel, et tient en sa main destre une espeé nue pour férir sur un homme sauvage qui emporte une dame qui tient en sa main une chayenne (châine) dont un lyon est liez." ‡

The framers of these inventories, when enumerating enamels upon gold and silver reliefs whieh were then in general use, do not naturally designate them by any particular term, but if they meet with an aneient pieee enamelled in a different style, they carefully distinguish it by some expression from the produetions of their own time. Thus we read in the "Inventaire de Charles V.," fo. 253:—"La croix de Godeffroy de Billon, en laquelle il y a ung vieil erucifix par manière d' esmail." The enamel of this cross, which belonged to the XIth century, had not the appearanee of translucid enamels upon relief; and therefore the framers of the inventory do not make use in this instance of the usual terms employed for the enamels of their own time; the cross of Godfrey of Bouillon must have been of cloisonné enamel, worked in the style of the pectoral eross (Fig. 47). We read again, fo. 49—"Ung hanap en forme d' un petit bassin d'or qui fut mons. saint Loys, qui est d' aneiens esmaulx." The cup of Louis IX. must have been enriehed with enamels either cloisonné or ehamplevé, those alone in use at his time. But the making of these enamels was nearly discontinued in 1379, and therefore they are described as ancient.

At a later period, when translucid enamels upon reliefs had in their turn become aneient, and that Limoges in the

* *Inventaire du duc d'Anjou*, fol. 5.

† *Hanap.* Name given in the middle ages to a vessel used for drinking. It varied in form according to the caprice or fashion of the age. When the king held his "cour plenière," his hanap belonged to the "grand bouteiller." In feasts, those who ate "à la même écuelle," had also the same hanap.—Millin.

‡ *Inventaire du duc d'Anjou*, fol. 13.

XVIth century, had produced a new species of enamel much esteemed at the time, with which cups and vessels of every description were decorated, it was necessary to give a name to enamels upon relief of gold and silver, in order to distinguish them from the champlevé and cloisonné enamels which are still more ancient. They were designated as enamels of *basse taille*, which was equivalent to the name of enamels on bas-relief given to them by Cellini * in the treatise in which he explains the manufacture.

Name given in the XVIth century to enamels upon relief.

Thus we find, in the inventory made at Fontainebleau the 15th January, 1560, after the death of Henry II.,† No. 89, "Ung coffre d'argent doré, garny de douze tables d'émail de basse taille fort anciennes, émailles de plusieurs couleurs." In No. 37, "Un petit tableau d'or qui se ferme òu il y a ung crucifiement émaillée de bas taille." At No. 572, "Deux petit tableaux d'émail de basse taille sur or." And near these examples, No. 93, "Ung coffret d'émail, façon de Lymoges, garny d'argent doré."

§ III. PAINTED ENAMELS.

When, towards the end of the XIVth century, works of copper enamel, which had been so esteemed for nearly four centuries, were now losing their value through the increasing taste for materials of gold and silver, and the translucid enamels that decorated them, the Limousin enamellers were compelled to invent some new mode of applying enamel to the representation of subjects. These endeavours gave rise to the invention of true painting upon enamel. The process employed in this new kind of enamel essentially differed from those hitherto in use. The enamellers no longer required the assistance of the graver to express the outlines of the design; the metal was entirely concealed under the enamel, and if any of it remained subjective to the painting, it was in the same manner as wood or canvas in oil painting, the enamel spread by the pencil

Causes which gave birth to painting in enamel.

* M. de Laborde, in his valuable "*Notice des Émaux du Louvre*," calls them "émaux de basse taille," and the champlevé he styles, "émaux en taille d'epargne."

† MS. Bibl. roy., no. 9501, Lancel.

upon the surface expressed at the same time the outline and the colouring.

It was probably the modifications introduced in the XIVth century, in the art of painting upon glass, which suggested this new style of enamelling. Mosaic grounds of coloured glass were at this time almost entirely discontinued, and artists had begun to paint superficially upon glass with enamel colours. From that time it became evident that what was done upon glass, might also be done upon copper, with the difference only of giving, either naturally or artificially, complete opaqueness to the colours.

It does not enter into the plan of this work to give detailed explanations of the composition of enamel colours, and upon the firing of the works thus painted; the artistic processes will be found fully detailed in works specially devoted to the subject,* it will be sufficient here, in order to understand the progress of the art, to point out briefly the various processes which were successively adopted.

Painted enamels of the XIVth to the XVth century.

The first attempts at this new kind of painting were, of necessity, very imperfect, and their imperfection has consequently been the cause of the specimens being almost entirely destroyed; painted enamels of the first epoch are rarely met with, and there are none in our public collections. The Abbé Texier has an enamel representing St. Christopher, of which he has published an engraving, and which he considers as one of the earliest specimens of the art.† The enamel colours are applied upon the metal in layers sufficiently thick to admit of the movement of the drapery which covers the shoulders of the saint, and the agitation of the waves which bathe his legs, being expressed by inequalities of the enamel paste, which is

* Enamel colours being exposed to a high temperature, the materials of which they are composed can be chosen only from the mineral kingdom, the colouring matters are therefore metallic oxides. These colours are finely pulverised and carefully mixed by different methods, with the vitreous compositions called fluxes, which are easily fusible. By the melting of the fluxes the colours acquire brightness and brilliancy and incorporate themselves with this vitreous surface. The reader may consult the work of Neri, the Memoir of M. Brongniart, *Ann. de chimie*, ix. 192; the *Traité des couleurs pour la peinture en émail*, by de Montamy; the *Traité de chimie appliqué aux arts*, by M. Dumas; the *Traité pratique sur la préparation et l'emploi des couleurs d'émail*, inserted in November, December, 1844, January, February, 1845, of the *Revue scientifique et industrielle*; the *Traité des arts céramiques* of M. Brongniart.

† M. Texier, *Essai*, &c., p. 185.

of an uniform colour. The drawing of these first attempts is always very defective. The enamel colours are applied immediately upon the metal itself, and are only attached by the fusion which determines the degree of adherence.

Towards the middle of the XVth century, painting in enamel had made great progress, and with the specimens before us we are enabled to explain the processes employed in making them. On an unpolished plate of copper, the enameller traced with a style the outline of the figure or subject to be represented. The plate was then overlaid with a thin translucid flux, after which the enameller began to apply his colours. The outlines of the drawing traced by the style were first covered over with a dark-coloured enamel, which was to give the outline upon the surface of the picture; the draperies, the sky, the back-grounds and accessories, were then expressed by enamel colours in tolerably thick layers, filling up the interstices formed by the dark-coloured outline which enclosed the different enamel colours, performing as it were the same office as the lines of metal in the process of incrusted enamels. There was therefore a total absence of shadow in this painting, in which the first design was expressed by thickness of colours. The space for the flesh tints was filled with a black or deep violet enamel; they were then rendered upon this ground by white enamel applied in layers more or less thin, in order to preserve the shadows, and thereby obtain a sketch very lightly in relief, of the principal bony and muscular parts of the face and the body; consequently, all the carnations in this process have a bistre or violet hue by which they may easily be recognised.

In order to produce effect in the rest of the painting in which the shadows were entirely wanting, the light parts of the hair, of the draperies and back-ground, were, most frequently, indicated by touches of gold. The imitations of precious stones applied upon the mantles of the saints and upon the draperies, are peculiar to this description of enamels, which are generally painted upon flat plates of copper, rather thick, and coated with a thick enamel at the back, presenting a vitreous appearance.

In the beginning of the XVIth century, when the arts of design were making such rapid progress, so imperfect a

process as the first attempts in painting in enamel could not long be sustained in practice.

Accordingly, about this period, we find a great change in the processes employed by enamel painters. Before beginning their painting they covered the plate of copper with a thickish layer of enamel, either black or of a deep colour. Upon the ground thus prepared they executed the drawing by means of different processes with white opaque enamel in such a manner as to produce a grisaille, of which the shadows were obtained either by laying on this white enamel less thickly in some parts than in others, or by scratching it away to let the black ground reappear, which latter operation was to be performed before the firing of the piece. A few heightenings of white and gold completed the harmony. The carnations continued, as before, to be lightly laid on in relief, but were almost always expressed by a flesh-coloured enamel.

Painted enamels of the XVIth century.

If the piece, instead of remaining in grisaille, was to be coloured, the different colours of a semi-transparent enamel were spread over the grisaille.

In the coloured enamels of this class the sky and some parts of the ground were often expressed by thick layers of colour.

The piece was of course placed several times in the furnace during these operations, which could only be done in succession.

Thus, by adding an enamel ground to the plate of copper, before beginning the painting, the colours, rendered capable of being worked with freedom and at different times, became susceptible of every kind of combination and of every degradation of tint resulting from their fusion. The drawing and painting was also rendered more perfect from its being easy to retouch them.

The Limousin enamellers employed a great many other processes, and possessed a number of practical resources, but the technical part of their art has not been sufficiently deeply studied to enable us to explain all the various methods, by the aid of which they arrived at those happy results which are now so much admired; we must therefore confine ourselves to generalities.

We cannot, however, omit to mention one process of which they frequently made use. In different parts of the draperies and accessories, a leaf of gold or silver, called *paillon*, or *clinquant*, was fixed upon the enamel ground; upon this thin leaf of metal the shadows were painted, it was then covered with a coloured translucid enamel; the lustre of the metal gave a brilliant effect which the artist knew how to turn to advantage.

The plates of metal employed in this second style are very thin, and the back enamel has little thickness, but, in order to prevent the plates from warping, they were rendered convex before coating them with enamel.

Various applications of painting in enamel in the XVIth century.

The talents of the enamel painters of the XVIth century were exercised on a vast number of objects, and present a great variety. Until towards the end of the first third of the XVIth century painting in enamel was employed almost exclusively for the representation of sacred subjects, of which the German school supplied the models; but the arrival of the Italian artists at the court of Francis I., and the publication of engravings of the works of Raffaelle and other great Italian masters, gave a new direction to the school of Limoges, which adopted the style of the Italian Renaissance. Cartoons for the Limousin enamellers were painted by Rosso and Primaticcio, a circumstance which has given rise to the idea that they themselves painted in enamel. The delightful productions of the engravers, to whom have been given the name of "Petits Maîtres," furnished also exquisite subjects for the artists in enamel.

Dating from about the middle of the XVIth century, the enamellers no longer confined themselves to the production of small pictures; they created a new style of metal work. Basins, ewers, cups, plates, vases and utensils of every kind, formed of thin sheets of copper, and most elegant in design, were overlaid with their rich and brilliant paintings.

For some years past the Limousin paintings have been much in request, and the museums of Europe have given an honourable place in their collections to these beautiful productions of the art of enamelling. These are happily too numerous and too well known to require pointing out.

It now remains to examine two questions of the deepest interest: at what epoch was true enamel painting invented, and what country gave birth to it?

From what epoch should we date the invention of painting in enamel, and what country gave birth to it?

The generality of writers, relying on the testimony of D'Agincourt, date the invention of painting upon enamel to the time of the making of the reliquary of Orvieto, assigning to the art an Italian origin.

This reliquary, a magnificent piece of metalwork, weighing 600 lbs., is a miniature model of the Cathedral of Orvieto. It serves to enshrine the holy corporal * of Bolsena.† Its principal front is divided into twelve compartments, each containing an enamel. Upon these the artist has represented different subjects relating to the miracle performed at Bolsena, and to the transportation of the holy cloth to Orvieto, by order of Urban IV. An inscription on the monument informs us it was made by Maestro Ugolino, a goldsmith of Sienna, in 1338.‡

D'Agincourt, who so readily disposes of these archæological questions, by stating that the sacred histories which ornament the principal front of the reliquary are "peintes sur fond d'émail," admits at the same time that he has not seen the monument,§ but derives his information from a work of Father della Valle,‖ from which he has taken the engraving that he gives.¶

Father della Valle had, however, been less precise than D'Agincourt; he confines himself to saying, "The reliquary is decorated with pleasing paintings in enamel, and with many well modelled statuettes."** The words "sur fond d'émail," on which depends the whole question, have no existence in the

* *Corporal.* A white linen cloth laid on the altar, on which the sacred elements are consecrated.

† As it is stated, a priest of the town of Bolsena doubted the doctrine of the real presence, and was convinced by drops of blood miraculously issuing from the host at the moment of consecration, and sprinkling the corporal or cloth upon the altar.

‡ The inscription read upon the reliquary by Father della Valle is this: "*Per magistrum Ugolinum et socios aurifices de Senis, factum fuit sub anno Domini* xccccxxxviii, *tempore Benedicti papæ* XII.

§ D'Agincourt, *Hist. de l'Art*, t. ii. p. 3.

‖ *Istoria del duomo d'Orvieto*, Roma, 1771.

¶ *Hist de l'Art peinture*, pl. cxxiii. Good engravings of the enamels of the reliquary of Orvieto are to be seen in a work entitled *Stampe del duomo di Orvieto.* Roma, MDCCXCI.

** "E tutto ornato di vaghe pitture a smalto e di molte statuette di getto non infelice."

text of Father della Valle, which D'Agincourt has amplified and so ill interpreted; nor as we shall show later, could they.

M. Du Sommerard, in the last journey he made to Italy, endeavoured to solve this question of art by careful examination of the monument, but he was not permitted to see it, experiencing the same refusal as D'Agincourt. The Cardinal Bishop of Orvieto assigned as an excuse, that the veneration of the people for the holy relic would not allow of his opening the doors of the sanctuary that contained it for the purpose of merely satisfying artistic curiosity.* The cardinal could only inform M. du Sommerard that the enamels upon the reliquary were executed after the ancient process.

It is therefore upon an unseen monument, and a hasty interpretation of Father della Valle's description, that D'Agincourt, and all those who have taken his word for it, affirm that the enamels of the reliquary of Orvieto, are painted upon an enamel ground, and thence infer that true painting in enamel was known in the beginning of the XIVth century, and also that the invention should be assigned to Italy. So M. du Sommerard, who was right in thinking that painting in enamel was of French origin, has had recourse to conjecture to explain the fact thus advanced by D'Agincourt. Relying upon this circumstance, that the popes who reigned during the construction of the church at Orvieto were nearly all Frenchmen, he supposes that the enamels which decorate the famous reliquary, must have been ordered and executed at Limoges, perhaps from cartoons sent from Italy.†

We do not consider this supposition to be admissible, and we trust to prove without having seen them, that the enamels upon the reliquary of Orvieto are not painted enamels, but translucid enamels upon a chasing in relief.

In the first place, there is every reason for believing, that at the beginning of the XIVth century, incrusted enamels only were, as yet, made at Limoges, and enamels formed by this earlier process are quite incapable of representing subjects so pure in design as those upon the reliquary of Orvieto.

* Du Sommerard, *Les Arts au moyen âge*, t. iv. p. 78. We have not been more fortunate than M. Du Sommerard, and have been unable to see the reliquary, which is only exhibited during the "Octave" of the Holy Sacrament. It is locked up during the rest of the year, under four keys, in the charge of different persons.

† Du Sommerard, *Les Arts au moyen âge*, t. iv. p. 82.

Besides, without seeking for enamels at Limoges, did not the Italians themselves make them in the beginning of the XIVth century?

We have seen above, that Agostino and Agnolo had worked with John of Pisa, from the end of the XIIIth century, at the enamelled silver bas-reliefs of the high altar of the episcopal palace at Arezzo, and that they reckoned many goldsmiths among their numerous pupils. Although Ugolino is not instanced as one of these by Vasari, it cannot be doubted that this Siennese artist must have been imbued with the lessons of the first pupils of John of Pisa, his countrymen. More than this, Agostino and Agnolo were called to Orvieto a little after 1326, by some of the Tolomei family, who were living there in exile, to execute some sculptures for the cathedral that was then building.* It cannot be a matter of doubt that artists of such merit must have been consulted upon the making of the reliquary, which was being constructed at the same time with the edifice in which it was to be placed. And of what enamels could Agostino and Agnolo recommend the use, except of those they had learned to execute under their master, John of Pisa, of those of which they had taught the process to their pupils, especially to Pietro and Paolo, who had gained so high a reputation for their enamelled chasings?

Was the Italian goldsmith of that period acquainted with any other kind of enamelling? They were all sculptors and chasers, and enamel was to them a mere accessory, which served to colour the works of their burin. It is at the precise period of the making of the reliquary of Orvieto, that, as we have seen, Cione flourished and his pupil Forzore, both goldsmiths and enamellers upon chasing. How can we suppose that the goldsmith Ugolino, who was also an able sculptor, since he decorated with exquisite little statues of silver the principal front of his reliquary, should be ignorant of this kind of enamelling, or imagine that an artist of such merit should have made application to foreigners to furnish him with enamels; above all, to the French, who were looked on by the Italians as barbarians, when Italian goldsmiths,

* Vasari, *Life of Agostino and Agnolo.*

his contemporaries and rivals, were distinguishing themselves everywhere by their rich enamelled chasings?

We must not be surprised at the expressions of "vaghe pitture a smalto" employed by Father della Valle, in speaking of the enamels of Orvieto. Translucid enamels on relief were so well executed by the Italian artists of the XIVth and XVth centuries, that it needs a practised eye to distinguish them from true paintings in enamel, formed with colours laid on with a brush, which causes Vasari to observe, with reference to the enamels of Pollaiuolo, that the most delicate pencil would find nothing to improve them. Besides, the Italians gave the name of painting to translucid enamels upon chasing in relief. Vasari, in the part of his introduction, "Alle tre arti del disegno," in which he treats of painting, devotes a chapter to painting in enamel, and this is the definition he gives: "There is another sort of work upon silver and gold, commonly called enamel, which is a species of painting united with sculpture." * After this description, he enters into an explanation of the processes, which differ in nothing from those we have quoted from Cellini. It is evident, therefore, that the expressions of Father della Valle are no warrant for deciding the question, as D'Agincourt has assumed, since they seem, according to Vasari, to designate paintings in translucid enamel upon relief. Apart from the enamels of Orvieto, what remains to Italy in support of her claim of having been the cradle of enamel painting? what document can she offer? what artists can she cite as having painted before the end of the XVIth century, with vitreous colours upon an enamel ground? Does Vasari, who wrote towards the middle of the XVIth century, the lives of its most eminent artists, speak of this kind of enamelling, the only kind which can truly be called painting? We have seen in his "Introduction to the Arts of Design" what he understood by painting in enamel; and in fact, the enamels he refers to, were never anything but chasings coloured with a translucid enamel; the enamel artists whose names he inscribes in his book are all sculptors, chasers, or goldsmiths;

* "Ecci un altra sorta di lavori in argento e in oro, communamente chiamata smalto, che é specie di pittura mescolata con la scultura."—G. Vasari. *Introduzione alle tre arti del desegno.* Ed. Livorno, 1767, t. i. p. 134.

not one of them is a painter; nor does the learned Lanzi say a word concerning the Italian enamel painters. Some, perhaps, would cite Luca della Robbia; but this artist, who belongs to the XVth century, was a sculptor, and his enamelled works are only reliefs in clay enamelled in white or colours: there is in them no painting, properly so called. With respect to the painters of majolica, their labours did not begin till the second half of the XVth century, and were only brought to perfection about the first quarter of the XVIth, when the school of Limoges had long been producing enamels painted on a metallic excipient.

Besides, Italy, essentially conservative, would not have failed carefully to perserve the work of these artists in enamel, had she possessed any, in the same manner that she has preserved in her museums, the works in enamelled sculpture of Luca della Robbia, and the painted earthenware of Faenza, Urbino, and Pesaro, those master-pieces of the Keramic art. If we go through her museums and her palaces, we shall soon be convinced that painting in enamel applied upon metal, is an art that has never flourished in Italy. The enamel paintings that we meet with there, are all from the school of Limoges, and even these are rare. In Florence, we have only been able to find one specimen slab up in a corridor of the Palazzo Vecchio. This enamel, which is injured, is signed with the monogram of Mouvearni, a Limousin enameller of the XVth century. At Venice, there are some fine enamels in the Manfrini palace, the most important of which is a triptych in grisaille; it is marked with the monogram M.D.P.P., which is that of Pape, an enameller of Limoges. The curator, however, does not hesitate to attribute it to Pietro Perugino. At Bologna, the museum of antiquities contains a tolerable number of enamels upon copper, diptychs, tablets, vases, cups, and basins of various kinds, but all these specimens belong to the Limoges school of the XVIth century, as is proved by the monograms of the principal enamellers. Lastly, at Rome, in the Vatican, that palace which contains so many sublime master-pieces, the only enamels to be found are a series of inferior Limousin paintings, attributed to Vauquer, an enamel painter of Blois; and we even think it

All the painted enamels of the XVIth century extant in Italy are Limousin.

is incorrectly that the modern inscription by which they are accompanied, attributes them to this artist, for Robert Vauquer, who died in 1670, painted after the manner of Toutin upon a white enamel ground, and not in the style of the Limousin enamellers of the end of the XVIth century or of the beginning of the XVIIth, to one of which periods belong the enamelled tablets of the Vatican.

The pieces of enamel painted upon metal, which may occasionally be met with in Italy, must be regarded only as individual works of artists who have formed no school; to none of them can an earlier date be assigned than the last years of the XVIth century, and they differ essentially from the Limousin productions, as much in appearance as in the process of their execution.

Germany had no enamel paintings in the XVth and XVIth centuries.

Germany can claim the honour which does not belong to Italy, with no better success. For a long time, however, the painted enamels of Limoges of the XVth century were attributed to Germany, and M. du Sommerard himself has expressed this opinion,* which he doubtless would have reconsidered had not death prevented him from finishing his great work. Thus this learned archæologist attributed to German art a triptych which he has published in his Album, 10th series, plate vii.

It is worthy of observation, that all the triptychs of this unknown artist are framed in the same manner, in a copper moulding decorated at intervals with small flowers.† This frame, independently of the style, is a distinctive sign of the works of this enameller. It may be thought singular that an enameller should be recognised by the workmanship of the frame surrounding his pictures, but then it must be borne in mind that the enamellers were generally only copyists, that they made objects for common use in large quantities, and that having once adopted a pattern, they would naturally keep to it and use it very frequently. Now, in the collection of M. Didier-Petit, was a triptych framed with this little flower-like moulding,‡ and of which the painting had besides

* *Les Arts du moyen âge*, t. iv. p. 87.

† There is one of this author at the Louvre; and that which has been engraved by M. du Sommerard is in the Musée de Cluny.

‡ M. Didier-Petit. *Catalogue de la collection formée a Lyon.* No. 123. Paris, chez Dentu, 1843.

the characters of M. du Sommerard's enamel. This triptych signed "Mouvearni," represented on one of the wings, St. Catherine trampling upon the devil, the collar of which bore the inscription: "J'enrage." Now, had the enameller Mouvearni been a German, he most assuredly would not have appended a French inscription to his work. It must also be observed, that the painting in enamel was more an art of copying than of invention; and since, as a consequence of the intimate relations between France and the house of Burgundy, the German and Flemish schools were predominant in France in even the XVth century, and continued exclusively to prevail after the extinction of that house until up to the period of the expeditions of Charles VIII. and Louis XII. into Italy, the French enamellers of the XVth century received their cartoons from the artists of Germany and Flanders, and took their ideas from the first engravings which issued from these schools.

Moreover, what town in Germany claims the honour of the invention of painting upon enamel? What document has been ever produced which can lead us to suppose that it owes its origin to that country, or even that it was cultivated there before the XVIIth century? Painted enamels of the XVIth are not so scarce there as in Italy; but only in the Chamber of Arts at Berlin have we met with these enamels of the XVth century reputed to be German.* These enamels, as well as all those of the XVIth century, to be found in that collection, the richest of all Germany in works of this class, are besides acknowledged as Limoges enamels by its learned conservators, MM. Ledebur and Forster. One only (No. 252), signed L. de Sandrart, and dated 1710, is attributed to a German painter of the name of Von Sandrat. The particle *de* which precedes the thoroughly French name of Sandrat, combined with the style of this painting, leaves no doubt of its Limousin origin. We find at Munich, in the Mixed Collection, a small number of enamels; some plates which must be by one of the Courtois; two cups signed with the monogram of Pierre Raymond, and the

* They appear to us the work of Mouvearni; on one of them (No. 1751) may be recognised the two first letters of his name, although partly effaced. Of the upper border, though almost entirely destroyed, enough remains to show the customary little moulding of his frames.

splendid bowl of the same artist, which he afterwards copied, and on which are represented in a circle the first events recorded in the book of Genesis.* In the "Treasure Chamber" of the king's palace, we also find three plates of fine colouring, like those of Pénicault, but we have not been able to ascertain if there are any monograms on these plates, having only seen them through the glasses of the cases, which are never opened. At Dresden, the celebrated Green Vaults contain a considerable number of fine Limoges pieces; the director of this treasury, M. de Landsberg, is too distinguished a savant to attribute to his own country productions decidedly French; all the enamels of the XVIth century, and of the beginning of the XVIIth, until the introduction of the enamels of Toutin, are catalogued by him as belonging to the school of Limoges.† At Vienna, as we have said before, the incrusted enamels are preserved in the Cabinet of Antiquities, the painted enamels are in the Imperial Treasury. They are curiously placed with the majolicas, in the coffered ceiling of a room, the closets of which contain jewels and specimens of the goldsmith's art. These enamels, few in number, are of the Courtois and P. Raymond. We have remarked, of this last enameller, several plates representing allegorically the different months of the year, after the pretty engravings of Etienne De Laulne. On our making a remark to one of the keepers on the bad situation allotted to these beautiful Limoges enamels, he told us, without directly answering the observation, that these enamels were not French but Italian. Thus, although ignorant of the French origin of the enamels of P. Raymond, painted after the prints of a French engraver, this keeper had no idea of attributing to Germany the enamels of the Imperial Treasury.

Limoges the cradle of enamel painting.

No town therefore out of France can be pointed out as having given birth to painting upon enamel; Limoges on the contrary, as early as the XIIth century, was celebrated for coppers enamelled by incrustation, which were plentifully distributed throughout

* One was in the De Bruge-Labarte collection, and another in that of the Comte de Pourtalès.

† A. B. De Landsberg, *Grüne Gewölbe* at Dresden, or Royal Treasury of precious objects. Dresden and Leipsic, 1845.

Europe. The processes of the composition of enamels and of their colouring, was then familiar to the enamellers of Limoges, and we may easily conceive that when the improvement in the art of drawing occasioned the discontinuance of enamels with metal outlines, these artists would strive to replace the enamel mosaics by paintings executed entirely with the enamel colours they had at their disposal. We have seen above the progressive improvement in enamel painting; it began with the exchange of the metal outlines for outlines of dark coloured enamel enclosing the different enamel colours; and it was not till the XVIth century that it realised the production of a true painting with proper lights and shades. Limoges, therefore, from the XIth century has been in constant and uninterrupted possession of the art of enamelling, and it is but reasonable to restore to it the honour of having been the cradle of true painting in enamel.

Principal Limousin artists.

The Limousin artists, simple and unpretending artisans, are scarcely known, except in their works; few of their names have been transmitted to us, and a host of monograms remain unexplained. Let us briefly state what is known of the most celebrated among them.

The names of the first enamel painters of the XVth century have been nearly all consigned to oblivion. They were not in the habit, (any more than their predecessors, the enamellers by incrustation,) of affixing their names to their works, and enamels of this period bearing a signature or a monogram are very rare.

Mouvearni.

We have already mentioned Mouvearni, whose signature is affixed to a triptych in the collection of M. Didier-Petit. Some people seem to question whether this name be that of the enameller, but we think there can be no doubt upon the subject. In fact, in addition to this signature at full length, there are upon several triptychs, treated in the same style, various monograms, which may all be referred to the same name of Mouvearni. For instance, the enamel we found of a compound character in the Palazzo Vecchio of Florence, and which is framed with the little grisaille moulding adopted by this artist, bears the monogram MF., which we translate as Mouvearni fecit. The triptych of

Berlin, painted in the same style, is signed MO, the two first letters of his name. A triptych, evidently by the same artist as these pieces, and framed with the customary flowered border, belongs to M. Carrand; it bears the letters M. P., the one at the right end of the central picture, the other at the left; should we not translate them by Mouvearni pinxit? In the collection of M. Baron, sold at Paris in 1845, was a triptych also by the same hand (No. 480 of the catalogue). The framer of the catalogue had pointed out upon this enamel the monogram A. R., which appeared in this manner for the first time. We do not think that these two letters are intended for a private mark or monogram; they are not placed by themselves at the bottom of the picture, like a monogram, but form part of an inscription which, according to the custom of the time, runs along the edge of the tunic belonging to the figure which occupies the left wing of the triptych. The remainder of this word, of which the two letters A R form a part, is concealed by the upper garment. Is it not the name of the enameller Mouvearni, which is thus supposed to be incrusted upon the bottom of the tunic?

In the enamels of this artist the outline is traced by lines of dark enamel, projecting from the layers of enamel colours applied between the lines of the outline; the lights of the draperies and of the background are indicated by heightenings of gold; the flesh tints alone are shaded and preserve a bistre or violet tint. M. Didier-Petit considers this enameller as having lived in the XIVth century,* but the style of his painting and the costume of his figures both indicate the XVth. He must have worked for many years, and his numerous pieces are of very unequal merit. The first have the characters of a very distinct epoch, and we may conjecture that he painted in enamel from the middle of the XVth century to about the time of Charles VIII.

Pénicault the elder.

From an enamel, (No. 169,) in the collection of M. Didier-Petit, evidently of the end of the XVth century or the first year of the XVIth, bearing the signature IEHANP.E. NICAULAT. M. Didier-Petit has thought himself justified in inserting the name of

* Didier-Petit. *Catalogue de la collection*, introd. p. 25.

Nicaulat in the chronological list he has given us of the Limousin enamellers. We rather incline to read in these letters the name of a Jean Pénicault, probably the father or grandfather of the Pénicault of whom we shall speak later; for it is certain that the Pénicault or Pénicaud family produced several enamellers in succession. The one who thus signed the enamel of M. Didier-Petit intended no doubt to Latinise his name, according to the custom of the time, and to separate each letter by a stop; but after having thus written the two first, he probably found that he had not sufficient space, and accordingly transcribed the remaining letters without separating them; the artistic enamellers were not scrupulous in these matters.

Be this as it may, the Pénicault, or P. E. Nicaulat who painted the enamel No. 169 in the collection of M. Didier-Petit, was a man of talent. He appears to have flourished at the end of the XVth century or in the first year of the XVIth.

We do not know the name of any other enamel painter until Léonard, long considered as the founder of the school, but who was only the head director of the royal manufactory of enamels founded at Limoges by Francis I. This prince bestowed on him, with the name of Limousin, to distinguish him from Leonardo da Vinci, the title of "peintre émailleur, valet de chambre du roi."

Léonard Limousin.

Léonard painted enamels for upwards of forty years. His first works are dated 1532, the last date given is 1574. In his first works he copies the German artists, and his figures are in the costume of his own time; but soon, under the influence of the Italian masters, whom Francis I. had attracted to his court, the style of Léonard improves, his drawing becomes more correct, his colouring more brilliant; he begins to copy the works of Raffaelle, and adopts entirely the Italian school. The talent of Léonard had reached its highest pitch in 1553, when he painted, by order of Henry II., for the Sainte-Chapelle, the two frames of enamels now in the Museum of the Louvre. In these magnificent pictures, the finest that have issued from the school of Limoges, Léonard Limousin has succeeded in uniting

originality of conception with gracefulness of design and correctness of execution.

He also excelled in portraits. Those of the Duke de Guise and of the Constable de Montmorenci, preserved in the Louvre, that of Catherine de' Medici in mourning for Henry II., in the Musée de Cluny, and those of Francis I., and of Antoine de Bourbon, formerly in the Debruge-Labarte collection, are master-pieces of their kind.

Léonard executed several enamels which appear to be painted entirely upon a ground of white enamel, and have almost the appearance of a painting upon majolica. At the Chamber of Arts at Berlin, there is an oval medallion of rather large dimensions, representing the harvest, which is tinted in this manner and signed with his entire name. It is thus also that are painted the full-length portraits of Henry II., in the character of St. Thomas, and of Admiral Chabot in that of St. Paul, preserved in the Museum of the Louvre. In these enamels, the layer of black enamel has been entirely covered with a layer of white, upon which the design has been drawn with a style or point, in such a manner as to cause the black to reappear to form the outlines; this black enamel shows through but slightly in the shadows, and the white enamel has been overlaid with white vitreous colours, which give to these paintings the appearance of a pale-coloured majolica. As these enamels had not the warm colouring of the generality of Limoges enamels, it is probable that they had little success, for Léonard seldom painted in this style and was imitated by few. M. Sauvageot has a casket signed with the monogram of Pierre Courteys, which is tinted after this manner, but the tone of colouring is much warmer than those of the Berlin medallion.

Léonard was not a mere copyist. In one of the rooms of the Town Hall of Limoges, there is a picture signed by him, dated 1551, which is not deficient in merit, and among his enamels we find some executed after his own designs.

After Léonard, we must name Pierre Raymond. A curious manuscript preserved in the Town Hall of Limoges, and given to the public by the Abbé Texier,* affords some

* *Essais sur les argentiers et les émailleurs de Limoges*, p. 216.

valuable information respecting a number of artists in enamel. From it we learn that Pierre Raymond was not only an enameller but an illuminator of manuscripts (*peintre imagier*).* He was employed to illustrate this manuscript for the confraternity of the Holy Sacrament, with representations of the different objects in goldsmith's work, of which they were making a collection.

Pierre Raymond.

Like Léonard, Pierre Raymond continued his labours during more than forty years. M. Maurice Ardent † quotes a cup by him dated 1534. A plaque in the collection of M. Sauvageot bears the monogram P. R., with the date 1541; in that of the Comte de Pourtalès are two ewers with the same monogram, the one dated 1544, and the other 1572; the first, which is very fine, shows the artist was in the vigour of his talent when it was painted. (Fig. 59.)

Fig. 59. Painted enamelled ewer. By P. Raymond. XVIth century.

Pierre Raymond, like many other enamellers, wrote his name in different ways; P. Rexman,‡ P. Remon, P. Raymon; a fine cup in the collection of M. Sauvageot, bears the name of Rexmon, with the date 1544. On a cup in the collection of M. Brunet-Denon, (No. 350 of the catalogue),§ we find it written P. Raymo, with a stroke over the o (ō) to indicate the abbreviation of the two last letters. In the manuscript of Limoges, his name is written thus, P. RAYMOND, which orthography we have adopted.

The drawing of Peter Raymond is always rather stiff. He generally uses hatches in his shadows, and painted chiefly in camaïeu or in grisaille; his coloured enamels are rare.

* *Peintre imager, imagier.* These words are to be found in the old accounts of the XIVth, XVth and XVIth centuries. The word *imager* has been preserved in the dictionary of the Academy only to designate a seller of prints, images, &c.; but archaeologists use the expression of *peintre imager*, to designate, as in the middle ages, the artists who decorated the manuscripts with designs in water colours. We find in the XVIth century the word *imager* alone applied to artists who executed or painted works of sculpture in plaster, wood, or wax.

† *Notice historique sur les émaux et les émailleurs de Limoges*, 1842, p. 21.

‡ M. Didier-Petit, work before quoted, p. 26.

§ M. Brunet-Denon. *Catalogue des objects d'art.* Paris, 1846.

One of the finest that can be mentioned, belonging to the collection of M. Roussel, has been published by M. Du Sommerard in his Album, 7th series, plate 24. In the grisailles of P. Raymond, the flesh tints are always tinted, but the process is common to all the enamellers of the XVIth century.

The Pénicauds.

Four artists of the name of Pénicaud appear to have lived about the middle of the XVIth century; Jean Pénicaud the elder, Jean Pénicaud junior, Pierre Pénicaud, and N. Pénicaud.

Jean Pénicaud, the elder, is a skilful draughtsman, and his colouring is full and remarkably brilliant, he never employs patches in his shadows, he often uses "paillon" in his coloured enamels. Six pictures by him, representing the legend of St. Martial, preserved in the collection of M. Alphonso Bardinet of Limoges, are dated 1544.*

Jean Pénicaud usually signed his pictures with the monogram I. P. upon the enamel ground. We sometimes also find the plates of copper upon which he painted, stamped at the back with a punch representing a P. terminating at the bottom in an L and surmounted by a crown. Didier-Petit † thinks that this stamp was not the mark of the enameller, but the maker of the copper-plates. We find a proof to the contrary in specimens formerly in the Debruge-Labarte collection. A portrait of Luther, signed upon the enamel I. P., is evidently by the same hand as a portrait of Erasmus, which is stamped on the back of the copper plate with the monogram, composed of a P and a L united under a crown, a monogram signifying Pénicaud l'ainé. Two other enamels in the same collection which have been attributed to Jean Pénicaud by all the connoisseurs, and especially by the Abbé Texier, are both stamped with this monogram upon the copper.

Pénicaud is not the only enameller who had his plates stamped. An enamel in grisaille, also in the same collection, is stamped upon the copper with a punch, bearing the letters I. K.; this enamel is evidently by the hand of the enameller

* Abbé Texier, work before quoted, p. 219. Maurice Ardent, work before quoted, p. 25.

† Work before quoted, p. 8.

Kip. This artist has signed in full a painting in the collection of M. Didier-Petit. (No. 54 of his catalogue.)

We think, therefore, that we must consider as marks of the enameller, the letters that we find struck with a punch upon the plates of copper. The Jean Pénicaud who writes junior after his name, signed an enamel in the Walpole collection of London, with the date 1539.*

Pierre Pénicaud added to the profession of enameller that of painter upon glass, as we are informed by the manuscript of the Hôtel de Ville of Limoges; he worked in 1555.†

The list of enamellers published by M. Texier, includes the name of N. Pénicaud, but without giving any document relative to this enameller.

The Courteys family.

The Courteys family has furnished a large number of enamellers. The name of these artists is to be found written in different manners upon their works: Courteys, Corteys, Corteus; they are generally called Courtois. We think that the real name of the family is Courteys, according to the signature of Pierre Courteys upon his principal works, as for instance on the great enamels of the Château de Madrid, two bowls in the Museum of the Louvre, and another with figures of elevated style preserved in the Chamber of Arts of Berlin. M. Maurice Ardent observes, in support of this opinion, that there still are Courteys at Limoges.

Pierre Courteys.

Pierre Courteys must have been the eldest of the family, for his enamels bear the earliest dates. Thus, in the collection of M. Brunet Denon, was a rather inferior enamel in grisaille (No. 460 of the catalogue), which is evidently the work of a beginner; this bears, with the monogram of Pierre, the date 1550. At the Louvre are enamels by him dated from 1560 to 1568. Pierre Courteys painted the largest enamels that ever have been executed. These consist of twelve oval medallions, 5 feet 6 inches high by 40 inches wide, upon which are represented some of the heathen divinities and the cardinal virtues. These magnificent pieces formerly decorated the front of the

* Strawberry Hill catalogue, No. 59. † Abbé Texier, work before quoted, p. 23.

Château de Madrid, built by Francis I. and Henry II. They are signed *Pierre Courteys*, with these words, *Fet à Limoges en* 1559. Three of these medallions are in England, the nine others in the Musée de Cluny. These large paintings are not faultless in design, but placed at a certain height in the front of a palace, their unfading colours must have given an astonishing effect to the edifice.

In objects of smaller size, Pierre Courteys is one of the best draughtsmen of the school of Limoges. His coloured enamels are of great brilliancy.

Jean Courteys.

Jean Courteys is perhaps the most prolific enameller of the XVIth century. It appears that, before becoming an enameller, he painted upon glass, at least, a memorandum cited by the Abbé Morance,* informs us that in 1532, a Jehan Courteys took a contract to execute a glass window for the church of La Ferté-Bernard.

Jean Courteys seldom dated his works. M. Didier-Petit † cites a date of 1568, without mentioning upon what piece he found it. The style of his compositions, profusely decorated with exquisite ornaments and arabesques, belong to the time of Henry II. The drawing of Jean Courteys is pretty correct, but has not much vigour; his colouring is very brilliant, his carnations are almost always coloured; M. Didier-Petit has characterised them by a highly appropriate expression, in saying they are *saumonées*.‡

I. D. Courteys.

In the family of the Courteys may also, we think, be included an enameller who signed I. D. C. His compositions so strongly resemble those of Jean Courteys, that the learned M. Pottier,§ in describing a large medallion of Jean Courteys, published by Villemin, considers it as the companion to another medallion in the Gallery of the Louvre, which he takes to be the work of the same enameller. After a close examination of the medallion of the Louvre, we found the monogram I. D. C. This piece gives a high idea of the talent of the enameller who made use of this signature: the principal figures upon it are hammered out in relief. His small pieces are of a high finish.

* *Bulletin Monumental*, t. v. p. 102.
† Catalogue before quoted, p. 27.
‡ Ibid, p. 27.
§ *Monuments français inedits*, t. ii. p. 165.

Jean Court, surnamed Vigier, also flourished under Henry II. He has been confounded with Jean Courteys, under the idea that the name of Court was only the abbreviation of Courteys; but some incontestable documents brought to light by the researches of MM. Texier and Maurice Ardent, both natives of Limoges, establish the fact that Jean Courteys and Jean Court were two different artists. For instance, upon the tax roll prepared in the XVIth century by the consuls of Limoges, we find, in the *Canton de Magnynie*, the name of "Jehan Court, dit Vigier, esmailleur, et Petit Jehan son fils," and twenty names further on, "Jehan Courties," and afterwards, "les heoirs de feu Courteis esmailleur."* M. Maurice Ardent † points out an act relative to the ownership of a property, in which appears the name of "Jean Court, dit Vigier," and reasonably suggests that a family name would not have been abridged in an official document.

Jean Court, surnamed Vigier.

Hitherto, three cups, the finest of which is in the collection of the Comte de Pourtalès, are the only signed works of this artist that have been pointed out. All three bear the same inscription, "À Limoges, par Jean Court dit Vigier, 1556." To the signed works of Jean Court should be added a pair of coloured enamel paintings in the Chamber of Arts at Berlin, one representing Christ before Pilate, the other his Resurrection. The first also bears this inscription, "À Limoges, par Jean Court, dit Vigier," and the same date of 1556. It is singular that every signed production of this artist should bear the same date, a circumstance which would lead to the idea that he painted in enamel only in this year, and this peculiarity would again distinguish him from Jean Courteys, whose labours, to judge from the numerous works he has left, must have been of long continuance.

Jean Court is a bolder and more correct daughtsman than Jean Courteys; his colouring is less warm, the carnations of his figures more natural, and free from the salmon-coloured tint which Jean Courteys usually employed. A magnificent dish of the latter artist is placed in the Chamber of Arts at Berlin, near two pictures signed by Jehan Court; their

* M. Texier, *Essai sur les émailleurs de Limoges*, p. 215.
† Work before quoted, p. 21.

proximity enables one easily to decide that the two compositions were never executed by the same hand.

M. D. Pape.

M. D. Pape is also an enamel painter contemporary with the Courteys. He signed his works in different ways. His complete monogram is: M. D. P. P., with a small *i* in the middle of the D. It is thus signed upon the great triptych in the Manfrini palace at Venice. After, he signs only with the two first letters, M. D. with the little *i* in the middle of the D. His name sometimes occurs written in full. A casket in the collection of M. Brunet Denon, (No. 352 of the catalogue,) is signed M. D. PAPE. At M. Sauvageot's is a fine plaque bearing the signature M. PAPE.

Pape is a good draughtsman, his colouring is full, and he uses but few hatches in his shadows.

Martial Courteys.

The Courteys family supplies also two enamel painters at the end of the XVIth century: Martial Courteys, and Suzanne Court or Courteys.

Martial was a skilful enameller. He is described as painter and goldsmith in the year 1579, in the manuscript of the Hôtel de Ville of Limoges, of which we have already spoken.

Suzanne Court.

Suzanne, who has been hitherto known by the name of Courtois or Courteys, has passed for the daughter of Jean Courteys, yet we have never seen this signature of Courteys or Courtois upon the enamels she has left, while there is in the Keramic Museum of Sèvres, a large bowl, a fine piece, signed Suzanne Court; at the Louvre, a large oval dish, representing the Wise and Foolish Virgins, signed in the same manner, and a ewer signed Suzanne de Court. As there was an enameller named Jehan Court, ought we not to restore to Suzanne the name of Court, as she signed herself, instead of that of Courtois, which has hitherto been given her?

Suzanne was of the school of Jean Courteys, but she did not equal her master; her drawing is weak, the figures of her compositions have a mincing expression, by which they are easily recognised; her colouring, at times very brilliant, is not always harmoniously distributed.

The name of Raymond, already celebrated under Francis I.

re-appears at the end of the XVIth century, with the proper name of Martial, upon several enamels of a good style. The manuscript of Limoges described this Martial as a goldsmith and enameller in 1590.* A triptych, of fine design in coloured enamels, preserved in the Chamber of Arts at Berlin and signed with his monogram, M. R., clearly shows that he flourished at that period. The two wings of this triptych bear the arms of Pope Clement VIII., who filled the pontifical chair from 1591 to 1605. To judge by this piece, the drawing of Martial Raymond is pretty correct, his heads, in particular, are well studied, but his colouring is of an uniform very pale tint. He uses "paillon" and heightenings of gold. MM. Texier, Maurice Ardent, Didier-Petit, and Dussieux, give the names in the chronological tables they have published, of several other enamellers of the XVIth century, whose works are less known: Rechambaut, Pierre Colin, Dominique Mouret, Jehan Boisse, Mimbielle, Isaac Martin, and Peguillon.

Martial Raymond.

Other artists of the XVIth century.

We began our list of the enamellers of the XVIth century with Léonard; Jean Limousin, who passes for his son, should be placed at the head of the enamellers of the XVIIth. A fleur-de-lis, often found between the two letters J. L. of his monogram, has led to the supposition of his having been director of the Royal Manufactory of Limoges, and his beautiful works would have rendered him well deserving of so honourable a distinction.

Jean Limousin.

Jean Limousin flourished at the beginning of the XVIIth century. A casket made for Anne of Austria, in the Debruge-Labarte collection, and which cannot consequently be anterior to 1615, sufficiently proves him to have been at that period in the full vigour of his talents. His name is also inscribed in the tax rolls † (*rôles des tailles*) of 1625.‡ This artist was

* M. Texier, work before quoted, p. 218. † Ibid. p. 208.

‡ *Taille.* A tax imposed upon the people, that is, on those who were neither nobles nor ecclesiastics, nor possessed of any peculiar privileges. The amount was determined in an arbitrary manner on the estimated fortunes of the tradespeople or on the produce they exported as farmers. It could be augmented without any formality, by a simple decree of council. This tax, which existed as early as the feudal system, was only levied on particular occasions for unseen emergencies. Charles VII. constituted it perpetual in 1440, to furnish the means of paying regular troops, which he was the first to institute.

remarkable for the exquisite delicacy of his small figures; and nothing can surpass the beauty of the arabesques, the flowers, and the birds executed upon "paillon," that accompany his compositions. A large basin in the Louvre, representing Esther at the feet of Ahasuerus, attests his excellence in the treatment of more elevated subjects.

We think that Jean Limousin has been rightly looked upon as a lineal descendant of the painter of Francis I., and it is said he remembered that Léonard was the family name of the enameller, Limousin being only one given him by his prince to distinguish him from da Vinci. Now, in the Debruge-Labarte collection was an enamelled saltcellar, evidently painted by Jean Limousin. This piece is signed, not by his accustomed monogram J. L., but with the L. expressing the patronymic and the surname of the author.

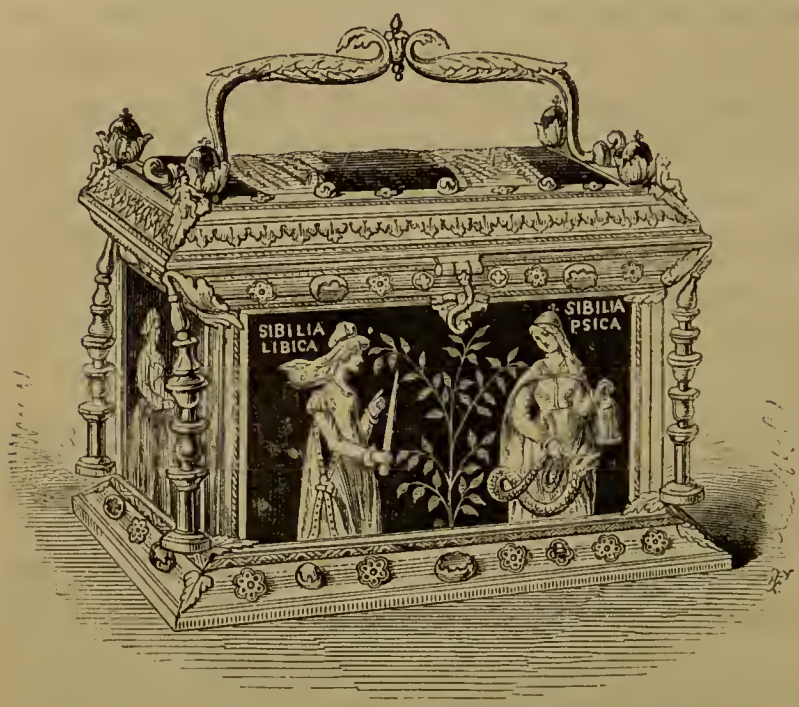


Fig. 60. Casket decorated with Limoges enamels in grisaille, representing the Sybils. Coll. Bernal.

H. Poncet appears to have lived about the same time as Jean Limousin. He has left several good works.

H. Poncet and other artists of the XVIIIth century.

M. Maurice Ardent,* by means of his researches among the tax rolls of 1624 and 1625, has added the names of the following enamellers: Antoine Lemasson, Bonin, Bernard, Antoine Terason, and Léonard Limousin, who must be the Jean Limousin just mentioned.

After the reign of Louis XIII. the family of the Noalher or Noualher, of which the name is transformed into Nouail-

* M. Maurice Ardent, work before quoted, p. 26.

her, and that of the Laudin appear to have supplied almost all the painters in enamel.

Jacques Noalher lived in the first half of the reign of Louis XIV.: he tried to employ enamel in a new manner, which consisted in modelling in relief upon the copper, with a paste of white enamel, figures, fruits, and ornaments, which afterwards received their colouring from vitreous colours.

Jacques Noalher.

Pierre Noalher lived at the end of the XVIIth century, and at the beginning of the XVIIIth. We have works signed by him with the dates from 1686 to 1717.

Pierre Noalher.

D'Agincourt, who in his "Histoire de l'Art" has not found a word to say about Léonard, Raymond, Courteys, Pape, or Pénicaud, has mentioned Pierre Noualher, an honour the artist doubtless owes to the usual correctness of his drawing; D'Agincourt being more pre-occupied with this merit than with the execution of the painting in enamel. In this respect, there begins, with the Limousin enamellers, of the end of the XVIIth century, the era of the decline of that school of Limoges, which had shone with so much splendour. Adopting the processes introduced by Toutin, at the end of the reign of Louis XIII., of which we shall make mention later, they abandoned in great measure those of their predecessors, and sought to give effect by the brush alone; the use of the "paillon" and a host of resources employed by the enamellers of the XVIth century were now given up; and correctness of drawing was obtained at the expense of the colouring, which became cold and destitute of transparency. This decline was, however, gradual, and the Limousin enamellers of the end of the reign of Louis XIV., still produced works which are held in great repute.

Noël Laudin the elder, is the contemporary of Pierre Noalher. M. Texier cites the altar cartoons preserved in the cathedral church of Limoges, as being among the most remarkable of his productions; but a coloured enamel representing a battle of cavalry, which we have seen in the Green Vaults at Dresden, must be considered as his masterpiece. The pureness of drawing and the beauty of the colouring of this enamel would lead to the

Noël Laudin

supposition of its being painted upon gold, and proceeding from the school of Toutin. Many pieces however of Laudin are of such inferior execution, the subjects scarcely shaded and upon a white ground, that without the signature it would not have been supposed that these wretched daubs had been executed by the same hand. It is probable that Nöel Laudin while he himself painted select works, had a workshop where his workmen manufactured pieces for domestic use by the dozen, a profitable speculation without doubt, but if Noël Laudin valued his reputation, he should never have affixed his signature to works so unworthy of his reputation.

J. Laudin.

Joseph Laudin, whose monogram is J. L., is one of the most prolific of the enamel painters, and must have worked for some time. In the Louvre is a fine enamel, dated 1693, and signed by him. This artist excelled particularly in grisailles.

Last artists of the Limoges school.

Among the enamellers of the XVIIth century are also cited: Baptiste Noualher, Valérie Laudin, Poillevet, Chousy, Lydon, and several others whose works are little known. To these we should add the name L. de Sandrart, who has signed an enamel with the date 1610, now at Berlin. From his style, this artist should belong rather to the school of the XVIth century, than to those of the end of the XVIIth.

After the reign of Louis XIV. the school of Limoges fell into complete decay. The descendants of the first Noalher, Jean-Baptiste, Bernard, Jean and Joseph, were only ignorant workmen, scarcely conversant with the first elements of design, although mention has been made of a portrait of Turgot, not entirely destitute of merit, which was painted by a Noalher in 1770. In general a coarse colouring and an uncertain and deeply marked outline, obtained by tracing engravings, serve to characterise most of the works of the last period of Limousin art.

New process of Jean Toutin.

The decline which began to be perceptible in the school of Limoges towards the end of the reign of Louis XIII. is attributable, in a great measure, to the introduction of a new mode of applying enamel to painting, which still remains to be described. In 1632, a goldsmith of Châteaudun, Jean Toutin, who was very

skilful in the art of employing translucid enamels, succeeded in discovering a set of vitrifiable colours, which when laid upon a thin ground of monochromatic enamel, to which a plate of gold served as excipient, vitrified in the fire without any change in their tints. In the use of these opaque colours, it was no longer needful for producing the shadows, to have recourse to the black enamel paste, employed by the Limousin enamellers. The opaque colours of Toutin were applied upon the enamel ground, in the same manner that water-colours are laid upon vellum or ivory in miniature painting.

It is incorrect, however, to consider Toutin as the inventor of the art of painting in vitrifiable colours upon an enamel ground. We have seen that Léonard attempted several times to paint with enamel colours upon a white enamelled ground; but the coloured enamels of the Limousin painters were ill adapted to this kind of work, and as we have already observed, their productions in this style have only the appearance of a light painting upon earthenware, a poor exchange for the warm colouring resulting from the ordinary process of the Limoges school of the XVIth century; and indeed Léonard had not many imitators, and executed only a few works of this description himself. The discovery of Toutin consists only in the preparation of various opaque colours, and his use of gold as an excipient for the thin enamel ground which he painted.

Isaac Gribelin.

It was to the painting of portraits in miniature that Toutin applied his process, and for this purpose associated with himself Isaac Gribelin, a painter in crayons of well deserved reputation.

Dubié, Morlière, Robert Vauquer.

They soon communicated their process to other artists, and had many pupils, among whom the first that distinguished himself was Dubié, a goldsmith to whom the king, in consequence of his talents, had given apartments in the Louvre. Morlière of Orleans, worked at Blois, and painted rings and watch cases, which became much in fashion. He had as a pupil Robert Vauquer of Blois, a skilful draughtsman, who excelled his master by the beauty of his colouring. Vauquer died in 1670.

Chartier, Petitot, and Bordier.

Pierre Chartier, also a native of Blois, was a successful painter of flowers. The artist who excelled all others in this new style of painting was Petitot, born at Geneva in 1607. Originally intended for a jeweller, he worked in the shop of Bordier where his principal business was the preparation of enamels. He succeeded in giving them such brilliant colours that Bordier advised him to devote himself exclusively to painting in enamel. These two artists united their talents; they went together to Italy, and there, while still applying themselves to drawing, they frequented the laboratories of the first-rate chemists of that country, from whom they received many useful lessons in the preparation of their enamel colours. They afterwards went to settle in England, where they gained much information from Mayerne, an eminent chemist and principal physician to Charles I.* This monarch conceived a great regard for them, and gave them orders for numerous works.

In this association of these two artists, each had his departments, Petitot painted the figures and carnations—Bordier, the hair, draperies, and ground. At the death of Charles I. in 1649, they repaired to France, where Louis XIV. received them with great honours. All the celebrated persons of the time desired to be painted by them. In one of the rooms of the Museum of the Louvre, reserved for the exhibition of the drawings, may be seen a frame enclosing a great number of portraits, the work of these distinguished artists.

On the revocation of the Edict of Nantes, Petitot, who was a member of the reformed religion, quitted France and retired to Geneva, where he died in 1691, Bordier having died the preceding year.

Other French artists.

It would take too long to enumerate all the French artists who applied themselves to this style of painting in enamel, suffice it to mention the most celebrated, viz., Prieur, with whose name we are made acquainted by his signature upon a fine portrait, dated 1645, in the Chamber of Arts at Berlin. Louis Du Guernier,

* Sir Theodore T. de Mayerne was physician successively of Henry IV. of France, and of James I. and Charles I. of England.

who died 1659; Louis de Châtillon, who flourished at the end of the reign of Louis XIV., and during the Regency, he died in 1734; Charles Boit, a native of Sweden, elected in 1717 a member of the Academy of Painting; J. Leblanc, by whom there is a rather large enamel in the Museum of the Louvre, representing a poor woman with four children, dated 1718; Jacques-Philippe Ferrand, died 1732; and Rouquet, Liotard, and Durand, who flourished about 1750, and struggled to keep alive the art of enamel painting, by that time almost extinct.

Painters in enamel not French.

The new mode of enamel painting soon spread beyond France. Among the foreign artists who cultivated this style, we shall instance as the most celebrated, Touron and Mdlle. Terroux, both natives of Geneva, and pupils of Petitot; Georg Strauch, of Nuremberg, of whom there is a fine enamel representing Peace embracing Justice, preserved in the Chamber of Arts at Berlin; Georg Friedrich Dinglinger, court painter to Augustus the Strong, Elector of Saxony, who had formed his style in France; Blesendorf, died 1706, the first who painted upon enamel at Berlin, and whose portrait of Queen Charlotte is in the Chamber of Arts; the two brothers Peter and Amicus Huault, who worked at Berlin in the reign of Frederick I., and of whom the same collection contains an enamel representing the family of Darius at the feet of Alexander, a copy from the picture of Lebrun; their French name and the subject of their enamel sufficiently show they belonged to France; Ismaël Mengs, died 1764, the father of the celebrated painter Raphael Mengs, who himself painted several enamels; a Madonna and a Ecce Homo by his hand are in the Green Vaults of Dresden; lastly, Zing and Meytens, both Swedes, died 1770.

Discontinuance of enamel painting.

Enamel painting restricted by the system of Toutin to the execution of miniatures, and applicable solely to works of small dimensions, could not have a long career. Towards the middle of the last century, it was almost given up, though some isolated artists still devoted themselves with success to this style of painting. Louis XVI. endeavoured to revive it in 1785, by commanding Weiller, one of the best enamel artists of his time, to

paint the portraits of several celebrated characters, and caused them to be exhibited at the Louvre in 1787.

Some artists, alike under the Empire and the Restoration, still employed themselves in painting in enamel upon gold; but in our times, when cheapness and expedition are the great requirements of the day, this species of painting would quite fail of success.

It is only by giving to painting in enamel a much wider range, that any available efforts can be made towards the restoration of this art, so truly French, and which formerly contributed so largely to the splendour of the middle age, and the period of the Renaissance.

CHAPTER V.

DAMASCENE WORK.

The art of damascening consists in expressing a design by means of wires of gold or silver imbedded in a less brilliant metal, such as iron or bronze, which serves as the ground. Sometimes also we meet with damascene work executed upon gold with silver threads or upon silver with gold.

Process of Damascene work.

The process was different according to the hardness of the metal employed ; when iron was used, the whole surface of the iron plate intended to be damascened, was covered with fine incisures, analogous to those upon the finest files, then upon this incised surface the artist traced the device he wished to represent by means of gold or silver wires, which he fastened by means of strong pressure, by driving them in by the hammer. The design being thus executed, the whole piece was polished with a burnisher, or some instrument of the same kind, which, while it fixed the gold and silver more firmly, obliterated the incisures upon the iron, and restored to it its original polish. When executed by this process, the damascening resembled a flat embroidery.

By a process somewhat analogous, was executed damascening in relief, of which a fine specimen may be seen upon the the armour of Henry II. in the Cabinet of Medals at the Imperial Library. The manner of proceeding was then different. Instead of covering the whole surface of the iron with these file-like incisions, the design alone was deeply engraved by the burin, and the wires of gold or silver were fastened by pressure in the incisures thus obtained.

If the metal to be damascened was one of inferior hardness to iron, as for instance bronze, the field of the metal

was slightly tooled out in the form the artist wished to represent; a thin leaf of gold or silver was applied upon the tooled part, and imbedded in it, by the turning over the bevelled edges of the metal surface upon the leaf of gold or silver thus incrusted, and the whole being planed to make a level surface, the artist was able to execute in the bronze the minute details of the ornament, either by means of chisels or gravers, or by stamping the piece with engraved punches.

The ancients practised damascening with success. They attributed its invention to Glaucus of Chios. The celebrated Isiac table,* refound at a locksmiths, after the sack of Rome, in 1527, was enriched with a fine damascening, which shows the Egyptians to have excelled in the art.

Damascene work of the Middle Ages.

Damascening was also practised in the middle ages; but the scarcity of works of that period serves to show that the nations of the West were not then acquainted with the process of enriching their works of iron or brass with this kind of decoration. The people of the Levant had, on the other hand, acquired great celebrity for this kind of workmanship, and from its being most successfully practised by the people of Damascus, the art derives its name.

We know that the famous bronze gates of the Basilica of San Paolo-fuori-le-mura, at Rome, the various subjects upon which are represented in rich damascene work, had been made at Constantinople in 1070.† Theophilus, who in his "Diversarum artium schedula," has treated of so many of the decorative arts, makes no mention of that of damascening in the parts of his work that have been transmitted to us. In his preface he assigns to the Arabs the pre-eminence in the art of ornamenting metals.‡

We should be disposed to think that the processes of damascening were introduced into Italy with those of many of the other industrial arts, at the beginning of the XVth century, for we see the art develope itself there, and

* The Isiac table derives its name from the goddess Isis, who is depicted upon it. Montfaucon, t. ii, 2e part, l. ii. ch. 1-3. De Caylus. *Recueil d'antiq.*, t. vii., pl. xii.

† D'Agincourt, *Sculpt.*, t. ii., p. 48, and t. iii., p. 14.

‡ "Quam si diligentius perscruteris, illic invenies . . . quidquid ductili, vel fusili, vel interrasili opere distinguit Arabia."

damascening applied from that period to a number of objects, most diversified in their nature. The workers in iron especially laid hold of this kind of decoration, and used it principally to enrich with elegant arabesques, the iron armour of men and horses, shields, and the handles and scabbards of swords.*

In the XVIth century, this art had attained its highest perfection. Caskets, tables, cabinets (Fig. 61), toilets of iron (Fig. 62), were made of the most elegant forms, and damascened with ornaments and arabesques of the most exquisite devices. Venice, and especially Milan, were distinguished for this art. Among the

In the XVIth century.

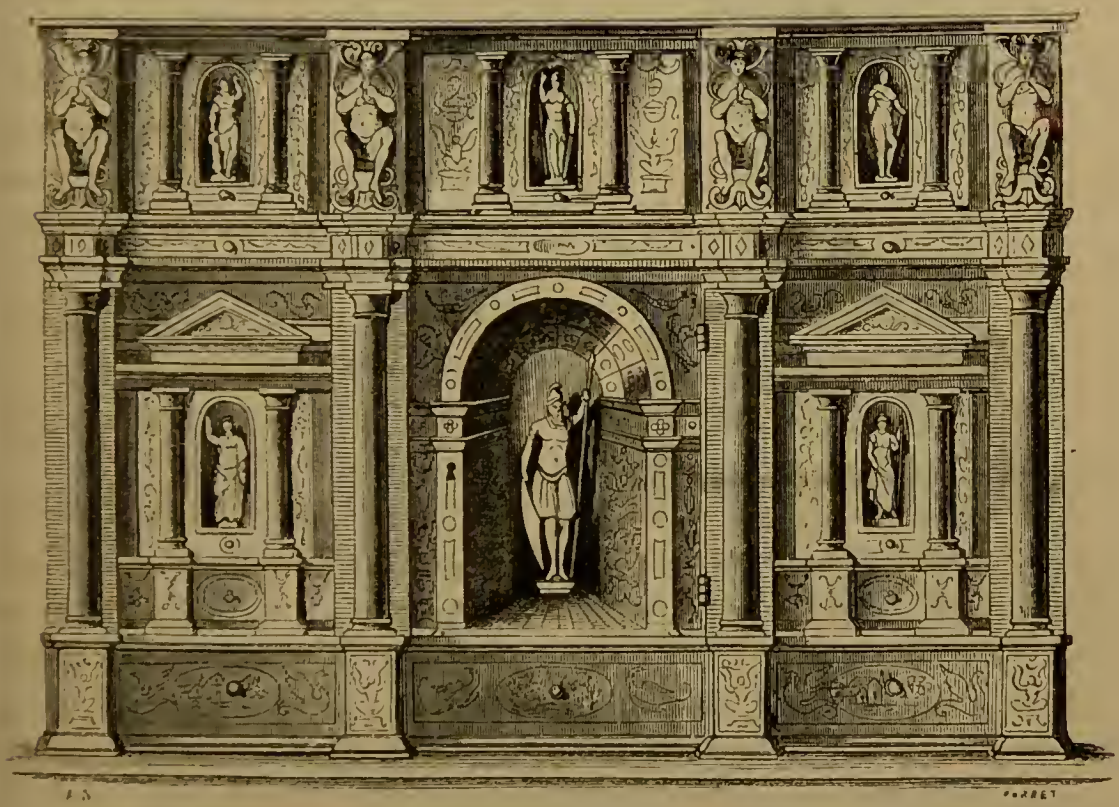


Fig. 61. Cabinet damascened in gold and Silver. Italian work of the XVIth century. Coll. Rothschild.

most celebrated Venetian artists of the beginning of the XVIth century must be reckoned Paolo, who received the surname of Azzimino, in consequence of his reputation in damascening; this work in Italy often receiving the name of *lavoro all' azzimina*,† because it was principally employed in

* Vasari, *Vite de' più eccellenti pittori*, &c., introduzione, cap. xxxiv. Edit. Livorno 1767.

† Cicognara, *Storia della scultura*, t. ii. p. 437.

the ornamentation of armour. Leonardo Fioravanti * makes mention of Paolo Rizzo, a Venetian goldsmith, who had invented exquisite damascenings.

Milan had, at the same time, workmen of equal celebrity: Giovanni-Pietro Figino, Bartolomeo Piatti, Francesco Pellizzone, and Martino Ghinello. We must add to these names those of artists who enriched with damascene work the productions of their respective arts:—Carlo Sovico, the goldsmith; Ferrante Bellino, and Pompeo Tureone, workers in iron; Giovanni Ambrogio, a turner of great merit; Filippo Negroli, a celebrated armourer, whom Vasari quotes as the most skilful chaser of damascene work of his time; Antonio Bianeardi, Bernardo Civo, Antonio, Frederico, and Luccio Piccinini, who made wonderful armour for the Farnese family, and Romero, who executed some of surpassing beauty for Alphonso of Este, the second of that name, Duke of Ferrara. That universal genius, Benvenuto Cellini, as we learn from his curious Memoirs,† exercised himself in his youth in damascene work; and he adds that the Lombards, the Tuscans, and the Romans, likewise cultivated this art about the same period, 1524; the Lombards were most famous for executing the foliage of the ivy and the vine, the Tuscans and the Romans in copying the leaves of the acanthus, with its shoots and its flowers, among which they introduced birds and small animals.

Fig. 62. Iron toilet-glass damascened in gold and silver. Italian work of the XVIth century. Coll. Soltykoff.

Damascening began to be practised in France in the second half of the XVIth century, and reckoned several

* Fioravanti. *Specchio di scienza universale.*

† *Vita di Benvenuto Cellini scritta da lui medesimo.* Ed. Firenze, 1830, p. 63.

skilful artists in the reign of Henry IV. Cursinet, sword-cutler at Paris, gained a great reputation as much by the purity of his designs, as by his exquisite manner of applying the gold and of chasing upon it in relief.*

* *L'École de la miniature, avec la mèthode pour étudier l'art de la damasquinerie.* Paris, 1766, p. 176.

CHAPTER VI.

THE LAPIDARY'S ART.

All nations, both ancient and modern, that have cultivated the arts, have ever displayed a predilection for cups and vases fashioned out of the beautiful mineral materials which nature herself supplies. When these kind of vases are enriched with figures or subjects, they belong to sculpture and to glyptics, according as they are cut from a soft or a hard stone; but where the artist has only given the model of the form, where the stone has been cut by a workman, and the specimen is remarkable, not so much as a work of art, as for the value of the material and the difficulties overcome in working it, it appears to us that vases should, under these conditions, be treated of in a separate department of artistic industry, under the title of the Lapidary's Art. We have divided them into classes—the first comprises vases of the precious materials, the second, those of marble and other softer substances. This distinction is necessary because the workmanship is different, according to the nature of the stone, and different workmen are employed in its execution.

The substances most sought after for the making of vases have been siliceous and quartzose transparent stones, such as gems and rock-crystal (Fig. 63); semi-transparent, such as prase, opal, girasol, agate, chalcedony, sardonyx, cornelian; or opaque, as the different kinds of jasper. Lapis-lazuli, although belonging to the argillaceous stones, has been equally in esteem, and may be classed among the hard stones, as it strikes fire with a steel. Marble and rocks have also supplied the material of some very fine productions.

The Romans, who displayed, in their taste for vases, great magnificence and prodigality, sought more especially those

in rare materials, preferring them often to those of gold or silver. What we find recorded by ancient authors of the number of vases and cups of this kind existing at Rome would appear incredible, if we did not also know, from the same sources, that these vases had formed part of the spoil of conquered provinces, and principally from those of Asia. Pompey having possessed himself of the treasures of Mithridates, brought to Rome the collection of treasures belonging to that prince, and dedicated them to the temple of Fortune. Pliny, in relating the fact, says, that Pompey was the first who made the Romans acquainted with the myrrhine vases. Although antiquaries are not agreed concerning the material of these vases, the more general opinion is, that they were cut from the sardonyx.

Fig. 63. Vase of rock crystal, mountings of silver gilt, chased and enriched with cameos and precious stones. Coll. Sir A. de Rothschild.

A few of these precious specimens have been preserved through the middle ages, and there is reason to believe that those to which they gave at that time the name of vases of "madre" were no other than the myrrhine vases of antiquity.* We frequently find these "vases de madre" catalogued in the inventions of the XIVth century.† They are generally enriched with mountings in gold and silver chased and enamelled, which proves the value then attached to these ancient pieces. Thus, we read in the inventory of Charles V., ‡ fol. 85: "Une couppe de madre garnye d'or dont en

* Du Cange, *Glossarium ad scrip. med. et inf. lat.* Roquefort, *Glossaire de la langue romane.*

† M. de Laborde considers the vessels of madre or mazer, to have been made of the root or heart of the maple, or other different kinds of wood.

‡ MS. Bibl. roy., no. 8356.

la pate du pié, qui est en façon de rose, sont six ymages enlevez et au pommel six roys, et est tout ledit pié à jour: c'est assavoir fleurs de lys, troys balaiz et six grosses perles, &c." Further, folio 203: "Ung hanap de madre à oreilles de soy mêmes sans nulle garnyson." It was considered that this vase derived its principal value from its handles cut out of one piece; it therefore was not mounted like the one before quoted.

We also find in old inventories some vases of crystal, agate, and jasper which must have been ancient. Of these, many had been appropriated to ecclesiastical purposes, and formed chalices and cruets, the mountings of which, in chased gold, were enriched with pearls and precious stones.* (Fig. 64.)

Fig. 64. Ancient agate drinking vessel, usually styled the Vase of Ptolemy, mounted in gold and enriched with precious stones, given by Charles III. (the Simple), to the Abbey of St. Denis, now in the Imperial Library, Paris, but without the gold mounting.

Yet we find but few of these vases cut out of hard materials, in the treasuries of the kings and of the richest abbeys,

* Felibien. *Hist. de l'abbaye de Sainte-Denis.* Paris, 1706, p. 541 *et seq.*

which again proves, what we have already stated, in speaking of glyptics, that the art of cutting and engraving hard stones was not practised in Europe during the middle ages, except at Constantinople. The treasury of the Church of St. Mark, at Venice, is very rich in vases of hard materials, brought home by the Venetians from the Imperial city when they took it in 1204. They are more remarkable for their large size than for the beauty of their forms.

When the Turkish invasion of the Eastern empire had forced the Greek artists to take refuge in Italy, carrying with them the art of glyptography, and when artists of the highest eminence had suddenly attained to the greatest proficiency in this art, endeavours were again made to find fine materials and to fashion them into vases of all kinds. At the beginning of the XVIth century, these vases were in extraordinary favour, and the greatest engravers of gems did not disdain to carve them with their own hands. Vasari informs us, that the celebrated Valerio Vicentino made a multitude of crystal vases for Clement VII., who gave some to different princes and the rest to the Church of San Lorenzo at Florence.* Jacopo da Trezzo also produced some very fine ones.† Gasparo and Girolamo Misseroni of Milan, pupils of that celebrated engraver, made also vases which were much sought after. Vasari particularly mentions two which had been ordered by the Duke Cosmo; the one cut out of a piece of lapis-lazuli, the other, out of a piece of heliotrope of prodigious size. The Misseroni family reckons also among its members other celebrated lapidaries, Ambrogio, Ottavio, and Giulio.

The brothers Sarrachi worked crystal to make vases in the form of a galley, of which the rigging and equipments were in gold.‡

The Cabinet of Gems of the Gallery of Florence, contains an immense number of these vases, the work of the first artists of Italy.

Francis I. and Henry II. had a decided taste for these rich materials so exquisitely worked, of which these princes

* Vasari. *Life of Valerio Vicentino* and other engravers in cameos.
† Ibid. Lives of the same artists.
‡ Cicognara, *Storia della scuplt.*, t. ii. p. 412, 413.

collected a considerable number. The inventory made under Francis II., the 15th of January, 1560,* "des joyaulx d'or et autres choses précieuses trouvées au cabinet du roi à Fontainebleau," serves to prove the existence of a large number of vases and cups of all kinds, of agate, chalcedony, emerald in the matrix, lapis lazuli, jasper, crystal, and other precious materials; the Museum of the Louvre has preserved several of the fine vases that belonged to the treasure of these princes.

Fig. 65. Sardonyx ewer. XVIIth century. Museum of the Louvre.

We also find very fine materials worked and richly mounted in the Imperial Treasury of Vienna, and in the Treasure Chamber of the King of Bavaria. The Green Vaults of Dresden contain a multitude of specimens of this kind, and especially five rock crystals cut by Milanese artists.

These productions of the lapidary's art were so esteemed in the XVIth century and the beginning of the XVIIth, that the mounting of them was confided to the most skilful goldsmiths. Among the precious pieces of the Cabinet of Gems of Florence, is a cup of lapis lazuli, of which the three handles in enamelled gold, enriched with diamonds, are the work of Benvenuto Cellini, and a vase of rock crystal, the gold cover of which was chased and enamelled by the same great master. Many of the vases in the collection of the Louvre are also most splendidly mounted. (Fig. 65.)

The cutting of vases in hard materials followed the fate of glyptics, and was nearly given up in the XVIIth century, but when the taste for cameos and intaglios re-appeared with the fine engravers of the XVIIIth century, a number of second-rate artists gave themselves afresh to this kind of work.

* MS. Bibl. roy., no. 9501. Lancel.

Pretty specimens issued from their hands; but we no longer find any pieces of large size in agate, lapis lazuli, jasper, and crystal, such as those that had been the pride of the Italian artists of the XVIth century.

In the inventory of Henry II. (No. 292), is a cup thus designated, "Un vase de lapis avec son couvescle godronné, garny d'or, où il y a une petite femme dessus, estimé 200 écuz." This description would apply to fig. 66.

Fig. 66. Lapis lazuli cup. XVIth century.

CHAPTER VII.

THE GOLDSMITH'S ART.

In the present day, our idea of the goldsmith's art is limited to working upon gold and silver. Our modern goldsmiths would not condescend to work less costly materials, but during the middle ages, and even at the time of the Renaissance, when the precious metals were not so abundant, the goldsmiths worked equally on copper and other metals.* We therefore include in our description, under the title of goldsmith's work, not only statuettes, bas-reliefs, vessels and jewels of gold and silver, but also shrines, reliquaries, and domestic utensils in copper chased and gilt, enriched with precious stones and enamels; the pewters of Briot, of wonderful finish, and in short all objects of metal-work which in their time belonged to the goldsmith's art.

Destruction of the specimens of metal-work of the Middle Ages.

One ought never to write the history of an art without access to the monuments it has produced; but this rule cannot possibly be adhered to in giving the history of the goldsmith's art in remote periods. The richness of the material has occasioned the loss of many artistic treasures, and but few pieces have escaped falling a prey to the ignorant cupidity, the necessity, the repeated disorders, of so long a course of centuries, while fashion, that goddess of change, whose destructive worship belongs to every age, has contributed even more than these combined causes to the breaking up of the finest specimens of the goldsmith's works. Nothing has been exempted from her influence, not even holy things, of

* In the XIth century in France the goldsmiths or workers in metal, were divided into four classes, fermailleurs, monétaires, fabricants ou monteurs de coupes, and orfèvres.

which we shall give but three examples out of a thousand that might have been adduced.

In 888, Count Eudes, who had just been proclaimed king, presented to the Abbey of Saint Germain des Prés, a magnificent shrine covered with plates of gold and precious stones, as a thank-offering to heaven for his having successfully repelled the attacks of the ferocious Normans. In this shrine were deposited the relics of Saint Germain, to whose intercession the Parisians attributed their deliverance. This monument had therefore every claim to respect, but, nevertheless, in 1408, the Abbot William, desiring to have a new shrine in the taste of his own time, consigned it to the crucible of three celebrated goldsmiths, whose work, beautiful as it might have been, could never replace the former votive offering of King Eudes. Not satisfied with this first act of vandalism, this same innovating abbot melted down a very rich altar frontal that one of his predecessors had given to the abbey in 1236.*

The XIIIth century, whose works were thus destroyed by the Abbot William, had furnished him with a precedent for destruction. In the reign of St. Louis, the shrine of Saint Geneviève, executed by Saint Eloy, had been melted down and remodelled.† The XVIth century trod boldly in the steps of the abbot of Saint Germain des Prés; by order of Louis XI. the tomb of St. Martin had been enclosed with a silver grating, of exquisite workmanship, as a testimony of the monarch's gratitude to the saint for the death of Charles the Rash, in 1522; this beautiful work was melted down by command of Francis I.

Thus when we see successive centuries of the middle ages apparently vying with each other in destroying the most venerable monuments, from no other motive than the love of novelty, let us cease to accuse as the only destroyers of the goldsmith's art, the protestants of the XVIth century, who were blinded by religious fanaticism, and Louis XIV. and the republicans of 1792, who were impelled by the necessity of providing for the defence of their country.

* Dom Bouillard. *Hist. de l'abbaye de Sainte-Germain des Prés.* Paris, 1734, pp. 59, 166, 167.

† The Abbé Texier, work before quoted, p. 45.

Whatever may have been the causes of their destruction, it is unfortunately too true that we have of the first centuries of the middle ages scarcely any productions of the goldsmith's art remaining, and that those of a later date than the Xth century, of which but a small number have escaped, are scattered, as it were, one by one. The consequence is, that after having visited all the collections of Europe, and the treasuries of its principal churches, we find ourselves reduced in tracing even an imperfect sketch of the history of the goldsmith's art, to generalities obtained from obscure texts, and imperfect descriptions.

Goldsmith's work from the IVth to the VIIIth century.

The goldsmith's art was much esteemed by the ancients, as may easily be gathered from their writings, as well as from the specimens that have descended to us. The triumph of the Christian religion under Constantine, gave a new impetus to the art. We learn by the "Liber pontificalis" of Anastasius Bibliothecarius, that Constantine, at the instigation of St. Sylvester, before removing the seat of empire to the east, presented the churches of Rome with most magnificent gifts. These were crosses of gold, weighing three hundred pounds, patens of gold of large dimensions, chalices of gold and silver, cruets for the wine of the offertory, lamps and lustres of different forms, enriched with the figures of animals, baptismal fonts, altar frontals, censers, and even statues of gold and silver.

The popes who succeeded St. Sylvester, continued to enrich the churches of Rome with precious gifts of the goldsmith's work, at all periods that they were not prevented from so doing by the troubles and wars that so frequently agitated Italy. Pope Symmachus (498 † 514), was the one who above all others after St. Sylvester, gave orders for the most costly pieces of workmanship. According to the calculation that D'Agincourt has been patient enough to make from the "Liber pontificalis" of Anastasius, they amounted to the weight of one hundred and thirty pounds of gold, and of seven hundred pounds of silver.*

But Constantine had called to Constantinople the most

* *Hist. de l'art*, t. i. p. 99.

skilful artists: a succession of them flourished there, and it was in this city, as we have before had occasion to remark, that the arts which minister to luxury made the most rapid progress. A taste for the works of the goldsmith became a general passion, and the art was no longer restricted to ecclesitical use. The palaces of the great rivalled the churches in magnificence; these sumptuous residences were adorned with prodigious quantities of vessels of gold and silver,* and the women displayed in their jewels an unprecedented luxury. "Our admiration is now-a-days all reserved for the goldsmiths and the weavers," exclaimed St. John Chrysostom, in his pulpit at Constantinople, while inveighing against the pride and luxury of the great; † and, shortly after, the holy patriarch, having dared to extend his censures to the Empress Eudoxia, paid with his life the freedom of his words.

It was not only at Constantinople and Rome that the goldsmith's art then flourished. Gaul, notwithstanding the invasion of the Franks, had preserved the habits of Gallo-Roman luxury and civilisation, and the first churches built in that country by the preachers of Christianity, were soon enriched with vessels of gold and silver. Of this, a curious document, the will of Perpetuus, Bishop of Tours, († *circ.* 477) affords a proof:—"A toi, frère et éveque, très cher Eufronius," says the holy prelate, "je donne et lègue mon reliquaire d' argent. J' entends celui que j' avais coutume de porter sur moi; car le reliquaire d' or, qui est dans mon trésor, les deux calices d'or et la croix d'or fabriquée par Mabuinus, je les donne et lègue à mon église." ‡ Let us then inscribe Mabuinus at the head of the list of French goldsmiths.

There remains but little goldsmith's work of the first centuries of the middle ages. The only pieces handed down to us are three or four vases of silver, preserved in the Museum Christianum of the Library of the Vatican, (Figs. 67, 68, 69, and 70) which must have served the purpose of cruets; § a pyxis‖ or toilet-casket in chased silver, discovered at Rome

* Prudentius. Περὶ Στεφάνων. Præf. 13.
† S. Chrysost., *In Joan. homil.* lxix. alias lxviii.
‡ *Testamentum Perpetui Turonis episcopi.* D'Achery, *Spicil.*, t. v. p. 106, ed. in 4to.
§ D'Agincourt, *Hist. de l'art*, t. i. p. 106.
‖ *Pyxis.* The Greeks and Latins so termed the casket (Fr. *cassette* or *coffret*) where

upon the Esquiline Mount in 1693, of which D'Agincourt has given the engraving,* and which Visconti has described;†

Fig. 67. Fig. 68. Fig. 69. Fig. 70.

Vessels of Silver, probably used as cruets. IVth century. Vatican.

(See also Figs. 42, 43, page 97.)

and, lastly, the sword with some mantle ornaments, found in the tomb of Childeric. The silver vases bear a great resemblance to those used by the pagans in their libations, and the casket for the toilet is stamped with the inspirations of antiquity. If we may judge of the goldsmith's art of this early period from these few specimens transmitted to us, we must come to the conclusion that the Christian goldsmiths had as yet no style of their own, but followed, like the sculptors, the aberrations of ancient art. With regard to the sword of Childeric, we have said already that we think it of Byzantine origin.

The destruction of the Roman Empire by Odoacer in 476, the invasion of the Goths, the wars of Belisarius and Narses, the establishment of the Lombards, and the disturbances

they placed their parures or jewels, probably so called because originally made of box-wood. They were afterwards enriched with gold, silver, ivory, and other costly materials, generally in the form of long squares, as often seen on the Greek vases. The statue of Venus rising out of water in the Chigi palace has one at her feet.—Millin. *Dictionnaire des beaux arts.*

* *Hist. de l'art sculpt.* pl. 9.

† *Lettera di Enio Quirino Visconti su di una antica argenteria.* Roma, 1793.

which were actually breaking out during their dominion in Italy, left that country few intervals of repose in the course of the Vth, VIth, VIIth, and VIIIth centuries. Yet although among the industrial arts, the goldsmith's may appear above all others to need times of tranquillity for its development, it still did not cease to be cultivated, even by the barbarians. The only specimens of that period which have reached us, proceed in fact from the gifts of Theodolinda († 616) Queen of the Lombards, to the Basilica of Monza, where they are still preserved. They consist of a rich box enclosing a selection from the Gospels, the cover of an Evangeliary ornamented with coloured stones, and the celebrated iron crown used at the coronation of the kings of Italy. This crown (Fig. 71) derives its name from the circle of iron

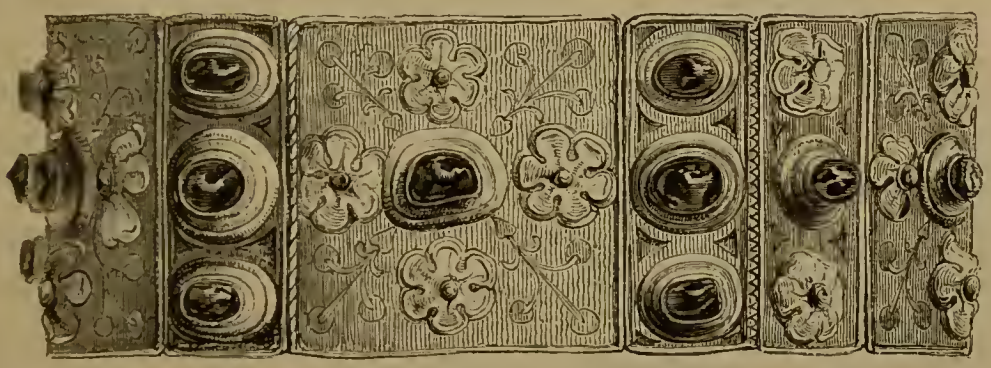


Fig. 71. Iron crown of the Lombards. Cathedral of Monza.

incrusted in the interior, and is supposed to have been forged out of one of the nails of the cross; it is composed of a kind of jointed collar in gold of about from $2\frac{3}{4}$ to 3 inches wide, and loaded with sapphires, emeralds, rubies, and other precious stones uncut, interspersed with flowers of gold.* Apart from its antiquity, it possesses no other merit than the richness of the materials of which it is formed, and does not manifest any great artistic talent in the Lombard or Italian goldsmiths of the end of the VIth century. The reputation of these artists rested chiefly upon the crown of Agilulph (Fig. 72), which was enriched with fifteen figures of gold: Christ between two angels, and the twelve apostles. Unfortunately this magnificent jewel, which was thought worthy of being carried to Paris in 1799 after the conquest of Italy, was

* It has been figured by M. Du Sommerard in *Album*, 10th series, pl. xiv.

stolen in 1804 from the Cabinet of Medals in the Imperial Library, and was melted by the receiver of the theft. It ought also to be mentioned that the jewels of Monza were restored, and even in part remade in the XIVth century by Antellotto Braceioforte, a celebrated goldsmith of that time,* which renders it probable that the golden figures of the crown of Agilulph may have been the workmanship of Antellotto, rather than of the Lombard goldsmiths.

Fig. 72. Crown of Agilulph. VIth century.

France, on her part, continued at the end of the VIth century to cultivate successfully the goldsmith's art, and Limoges appears to have been the principal centre of this industry. It was in this time that Abbon flourished, a goldsmith and mint-master (*monétaire*),† with whom was placed the young Eloy (588 † 659), who rose from a simple artisan to be the most remarkable man of his century, and whose virtues were rewarded by canonisation.‡ The apprentice soon excelled his master, and his fame caused him to be summoned to the court of Clotaire II., for whom he made two thrones of gold enriched with precious stones, from a model made by the king himself, who had not been able to find a workman sufficiently skilful to execute it. The talents and probity of Saint Eloy also gained him the affection of Dagobert I.,§ who entrusted him with important works. Saint Ouen, the biographer of Saint Eloy, and the anonymous monkish historian of Saint Denis, have left us an enumeration

* Muratori. *Rer. ital. scrip.*, t. xii. *Cron. de Monza*, scrit. da B. Morigia.

† The Monetarii, (Fr. *monétaires*) under the first and second races of the French kings were officers who had the whole direction of the coinage, and superintended all matters connected with it. They in their turn were under the control and surveillance of the "Comtes des villes." Both affixed their names to the coinage, with this difference, that the moneyers always set forth his quality (*m. mo. mon. monet*, &c.) the Count only his name.

‡ Audoenus, *In vitâ beati Eligii.* D'Achery, *Spicil.* t. v. p. 157.

§ *Gesta Dagoberti.* Du Chesne, t. i. p. 578.

of his works of art. The principal of these are a large cross of gold enriched with precious stones, made for the Basilica of Saint-Denis; the mausoleum of that holy apostle, the marble roof of which was covered with gold and precious stones; the shrine of Ste. Geneviève; that of St. Germain or Germanus, and above all, the shrine of gold of surprising workmanship, which he made to contain the relics of St. Martin, bishop of Tours.*

Before 1790, a great number of churches and monasteries, especially Saint-Denis and the Abbey of Chelles, still possessed some pieces of goldsmith's work, attributed to St. Eloy; but these having all disappeared, it is not now worth while to discuss their authenticity. There is still, however, in the Library at Paris, having been removed from the sacristy of the royal church of Saint-Denis, a bronze seat (Fig. 73), engraved and gilded, which has from the XIIth century † been regarded as having been made for Dagobert. It is now generally thought that the lower part of this piece is an ancient curule chair, and that the open worked back and the arms alone may possibly have been added in the course of the Xth or XIth century.

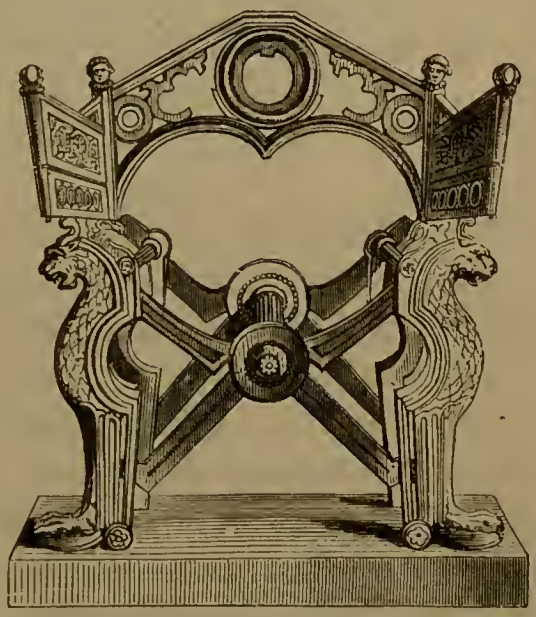


Fig. 73. Chair or throne of Dagobert. VIIth century. Imp. Lib. Paris.

St. Eloy, having become treasurer and mint-master to Dagobert, was, in 640, elevated to the see of Noyon. It is easy to suppose that, when a minister and a high ecclesiastical dignitary, the holy prelate would give up exercising personally the art to which he owed his elevation. It was, doubtless, this which induced him to found the monastery of Solignac, near Limoges, in which he assembled monks skilled in all the arts,‡ who undertook to

* "Sed præcipuè, B. Martini Turonis civitate, Dagoberto rege impensas præbente, miro opificio ex auro et gemmis contexit sepulcrum." Audoenus, *In vit. beati Eligii*, op. cit., p. 184.

† Sugerii *Lib. de rebus in administ. sua gestis*, Du Chesne, *Hist. Franc. script.* Lut. Paris, 1641, t. iv. p. 348.

‡ "Habentur ibi et artifices plurimi diversarum artium periti." Audoenus, *In vit. beati Eligii*, op. cit., p. 171.

perpetuate his instructions, and to practise the various branches of artistic industry then principally applied to the production of utensils for ecclesiastical use. Thillo, known under the name of St. Théau, a pupil of St. Eloy,* lived some time in the monastery of Solignac, for the purpose, doubtless, of directing the young monks intended for the profession of goldsmiths.

The example set by St. Eloy, was followed, moreover, in after ages by princes as well as bishops; a large number of monasteries were founded, with the august mission of cultivating sciences, letters, and arts, a mission nobly fulfilled, for the monasteries were their only depositories during times of suffering and darkness, in the midst of wars and invasions which threatened their very existence.

Carlovingian epoch.

Thus, when Charlemagne wished to restore the cultivation of the arts in the vast empire he had subjected to his sway, he found, in the goldsmith's department, artists ready to carry out his views. The churches were abundantly provided with vessels of gold and silver; while princes and bishops rivalled each other in the magnificence of their gifts to the basilicas, restored and embellished by the orders of the powerful emperor.† Charlemagne's will, transmitted to us by Eginhard, is a curious evidence of the immense riches possessed by this prince in works of the goldsmith's art. Among other objects, we must notice three tables of silver and one of gold, of considerable size and weight. On the first was traced the plan of the city of Constantinople, upon the second a view of Rome; the third, very superior to the others in the beauty of its workmanship, was convex, and composed of three zones containing a description of the whole universe, figured with skill and delicacy. Thus, science and art had united their efforts in the execution of these monuments.

A considerable number of the finest specimens of the goldsmith's art possessed by Charlemagne, followed him to the tomb. It is said that his body was embalmed and enclosed

* Audoenus, op. cit., p. 163.

† Many details and numerous quotations that this introductory sketch does not admit of giving, will be found in *Les arts au moyen âge* of M. Du Sommerard, t. ii. p. 428 *et seq.*

in a sepulchral chamber, under the dome of the Church of Aix-la-Chapelle. He was seated upon a throne of gold and clothed in his imperial robes, at his side was a sword of which the pommel as well as the decorations of the scabbard were of gold; his head was ornamented with a chain of gold, in which was enshrined a piece of the true cross. Before him were suspended his sceptre and his buckler, both also of gold.*

These riches attracted the cupidity of the succeeding Emperors of Germany, who took possession of them: probably the spoliation occurred when, in 1166, Frederick Barbarossa, who had obtained from the anti-pope, Pascal, the canonisation of Charlemagne, took his body from the tomb and distributed his bones to be enclosed in shrines and reliquaries as those of the saints.† The only specimens of goldsmith's work remaining to us belonging to that great man, are his crown and sword, described in our chapter on enamels.

The calamities that befel Italy, during the VIIth and VIIIth centuries, no doubt prevented the popes from folling the example of Symmachus and his predecessors, who had endowed the churches of Rome with valuable gifts of metal-work, and the last act of liberality recorded by Anastasius was on the part of Honorius († 638); but as soon as Charlemagne had by conquering Desiderius, destroyed the empire of the Lombards, and consolidated the temporal power of the Roman pontiffs, we find Adrian I. (772 †795) giving noble encouragement to the arts, and causing to be executed, for different churches of Rome, a large number of tabernacles (*ciboria*)‡

* Mabillon, *Discours sur les anciennes sépultures des rois*, Mém. de l'Acad. de Inscr., t. ii. p. 698, 699.

† The shrine of Charlemagne in the church at Aix la Chapelle has been recently opened in the presence of the Abbé Arthur Martin. who thus describes the state of the bones. "On eut bientôt la garantie que la châsse renfermait seulement un corps, auquel il ne manquait, à peu de chose près, que les grands ossements conservés à part." *Cabinet de l'amateur*, t. ii. p. 469.

‡ *Ciborium*. This name was originally confined to the vessel in which the host was kept, and was generally in the form of a dove or a tower, suspended over the altar. But as luxury increased, the ciborium, under the name of tabernacle, extended into an architectural erection over the altar, decorated with all the ornaments the sculptor and the goldsmith could suggest; and from the centre hung the vessel containing the host. The tabernacle was generally a kind of dais or canopy, supported by four columns, forming four open arches over which were hung rich curtains which reached to the ground, and were withdrawn only during certain periods of the celebration of mass. The ark of the Jews suggested the idea of the ciborium (Gr. κιβωτος,

candelabra, lamps, utensils of every kind, and statuettes in gold and silver. His successor, Leo III. (795 † 816) far surpassed him in munificence, and the extract made from the book of Anastasius, of the value in weight of the gifts made by him to the churches of works in the precious metals, does not amount to less than 1,075 lbs. weight of gold and 24,744 lbs. of silver.*

In Italy the great dignitaries of the Church followed the examples set them by the popes, and the magnificent altar of gold, of the Church of St. Ambrose at Milan, which has passed uninjured through ten centuries, notwithstanding its immense value, gives a high idea of the importance of the goldsmith's art at the beginning of the IXth century. The "Palliotto," as this monument is usually styled, was executed by Wolvinus in 835, by order of Angilbert II., Archbishop of Milan. The four sides are extremely rich. The front, entirely of gold, is divided into three panels by a border of enamel. The centre panel describes a cross of four equal arms or branches † bordered by strips of enamel ornaments alternating with carbuncled precious stones (*cabochons*). Christ is seated in the centre of the cross, the symbols of the evangelists occupy the branches, and the twelve apostles are placed three by three in the angles. All these figures are in relief. The right and left panels each contain six bas-reliefs, the subjects taken from the life of Christ; they are framed in borders formed by enamels and precious stones arranged alternately. The two sides of the altar are of silver enriched with gold, and are decorated with rich crosses treated in the same style as the borders. The back, also in silver enriched with gold, is divided, like the front, into three

ark). Latterly, curtains were abolished, and the form insensibly changed into what is now styled *baldachino*. The ciborium erected by Justinian when he rebuilt St. Sophia far exceeded all others in splendour. Four columns of silver gilt, supported a canopy of silver, upon the top of which was a globe of massive gold.

* D'Agincourt, *Hist. de l'Art*, t. i. p. 101.

† The divisions of the cross are called arms, limbs, or branches. The cross is composed, according to the French Archæologists, of two parts, the vertical shaft styled the *hampe*, and the transverse beam or bar, the *traverse*. The *hampe* is divided into the *sommet* and the *pied;* the two lateral parts of the *traverse* are termed *croisillons*. The crosses with one, two, or three transverse beams, were made the medium of hierarchical distinction. The Pope alone was entitled to have borne before him the triple cross, cardinals and archbishops were distinguished by the double cross, and the single was reserved for the bishop. Didron, *Iconographie Chrétienne*.

large panels; the centre containing four medallions with subjects, and each of the two others, six bas-reliefs illustrative of the life of St. Ambrose. Two of the medallions of the centre panel represent scenes of great interest; in the one, St. Ambrose is receiving the golden altar from the hands of the Archbishop Angilbert; in the other, St. Ambrose is blessing the architect Wolvinus. The inscription on the ground, WOLVINUS . MAGISTER . PHABER, has transmitted to us the name of the eminent artist who executed this magnificent specimen of metal-work, of which no description can give a correct idea.* We recognise in the general character, as well as in the details of this monument, that it was erected under the influence of Latin art. Lanzi compares it, in style, to the finest ancient diptychs of ivory.

It was not Italy alone that distinguished herself in the IXth century by the magnificent productions of her goldsmiths. France had preserved the artistic processes transmitted to her by St. Eloy. The bishops of Auxerre, especially, were celebrated for their love of the arts, and their taste for rich specimens of ecclesiastical metal-work. Bishop Angelelme (813 † 828) endowed the Church of St. Stephen with silver altar-tables, and with three crowns, and ten candlesticks of the same metal; he also gave a very large cross with the face of the Saviour in gold. Héribald, his successor, († 867) followed his example. Abbon, having failed to realise, in his lifetime, the project he had formed, of over-laying the high altar with gold and precious stones, secured to his church, by his will, the means of accomplishing this work; lastly, Vala, († 879) made a present to his cathedral of several gold and silver vessels and of various precious ornaments.†

In 852, Hincmar, Bishop of Rheims, caused a splendid shrine to be executed to contain the body of St. Remi; it was overlaid with plates of silver; and surmounted by statues of twelve bishops, his predecessors.‡ This prelate, on the occasion of the translation of the relics of the saint to the crypt of the new Basilica, added again to his first gift an

* M. Du Sommerard has given a fine coloured engraving of it in his *Album*, 10th series, pl. xviii.

† L'Abbé Le Bœuf, *Mém. sur l'hist. d'Auxerre*, t. i. p. 173.

‡ *Essais hist. sur l' église de Reims.* Reims, 1843.

Evangeliary remarkable for its cover, enriched with precious stones, a cross of gold, and some rich ornaments.*

Pieces of metal-work of the IXth century are extremely rare. Besides the golden altar of St. Ambrose and the crown of Charlemagne, we have only to instance the cover of the "Hours," written for Charles the Bald, between 842 and 869, preserved in the Imperial Library (MS. lat., no. 1152): this cover, which appears to have been contemporary with the execution of the manuscript, is adorned with two beautiful tablets of ivory, finely sculptured in high relief. The one is surrounded by a large border of carbuncled precious stones, set in little plates of silver of an oval form; the other with a tracery of filagree, skilfully arranged, forming a kind of whorled work enriched with precious stones. To judge from the crown of Charlemagne and this book-cover, we should be disposed to pronounce that the accumulation of precious stones was the chief characteristic of the ancient jewellery, and that purity of form was sacrificed to magnificence. In the XIIth century, Suger already expressed this opinion.†

But the works of the Western goldsmiths could bear no comparison with those of the Eastern empire. Basil, the Macedonian (867 † 886), did not rest satisfied with restoring the worship of images, but decorated the churches with incredible luxury: gold, silver, precious stones, and pearls, were scattered about, if we may credit the narrative of the Emperor Constantine Porphyrogenitus,‡ with a profusion which surpasses imagination. Leo the philosopher, († 911) and his son Constantine († 959), whom we have just named, continued to give noble encouragement to the arts, and it cannot be doubted that the goldsmith's art, which had shed such lustre upon the reign of Basil, was maintained at Constantinople in a very flourishing state throughout the Xth century. In support of this opinion, we again draw attention to the fact, that it was from artists of this city that the Doge Orseolo ordered, in 976, the celebrated Pala d'Oro of St. Mark of Venice, the finest specimen of enamelled goldwork that has been handed down to posterity.

* *Annal. bened.* t. iii. p. 17 *et seq.*

† Sugerii *Lib. de rebus in adm. sua gestis,* apud du Chesne, t. iv. p. 346.

‡ Const. Porph. *in vitâ Basil. Maced.* Coll. Byz. script. post Theophanem.

The Museum of the Louvre possesses an excellent specimen of Byzantine metal-work; it is either the top of a box, which has served to contain a sacred book, or perhaps the side of a book-cover. It consists of a bas-relief, executed in repoussé work upon a plate of gold, representing the two Maries visiting the tomb of Christ, where an angel is seated who proclaims the resurrection. Inscriptions, in relief, relating to the subject, form a border round the picture; and some on the ground are taken from the Gospels of St. Mark and St. Matthew. The fine character of the figures, the taste displayed in the arrangement of the draperies, and the finish of the execution, bear a favourable testimony to Byzantine skill, and afford a proof that, in the industrial arts, the Greeks preserved, until the XIIth century, their pre-eminence over all the nations of Europe.

The Xth century was, for the West, an age of iron; calamities of every kind overwhelmed Italy especially, and it cannot be wondered at that, amidst incessant troubles and devastating wars, Wolvinus, who had rendered the goldsmith's art illustrious at the beginning of the IXth century, should have no successors in the Xth.

Yet, in following the researches of the Abbé Le Bœuf, we find that while all the other arts were well nigh abandoned, the French goldsmiths pursued their labours during this disastrous period. The Bishops of Auxerre, Gaudry († 933) and Guy († 961), treading in the steps of their predecessors, had enriched their cathedrals with new gifts of metal-work;* the Archbishop of Sens, Sêvin or Seguin († 999), had given to his church a superb golden altar, more than nine feet long, enriched with bas-reliefs. This magnificent specimen of the goldsmith's art, the execution of which is attributed to two canons of Sens, Bernelin and Bernuin, skilful goldsmiths, existed till 1760, when it was destroyed by order of Louis XV., in aid of the expenses of the war.†

The XIth century was, as we have observed, a period of renovation, the principles of ancient art had fallen completely into oblivion; and the goldsmith's, which had already departed

* L'Abbé Le Bœuf, *Mem. sur l'hist. d'Auxerre*, t. i. pp. 214, 222.

† M. Du Sommerard has given an engraving of it in his *Album*, 9th series, pl. xiii.

from them in some of its productions, followed the steps of the other arts. It was necessary for the service of the temples which arose on every side in a new style, that there should be provided appropriate plate, and the goldsmiths found it necessary to invent other forms for ecclesiastical vessels, and for shrines to contain the relics of the saints; the same enthusiasm which led princes, communities, and people to demolish the old churches for the sake of building new ones, leading them also to refashion the utensils, and consequently to melt down almost all the pieces of goldsmith's work. Of this, the great scarcity of ecclesiastical works in metal before the XIth century affords a convincing proof.

Goldsmith's work of the XIth century.

The forms then adopted for the different church utensils received the stamp of a severe style pre-eminently ecclesiastical. Throughout the middle ages they preserved this character, which was again altered, decidedly for the worse, by the re-introduction of Græco-Roman forms.

In the works of the goldsmiths of the XIth century, as in those of the other arts, we find a certain Byzantine influence, which is no matter of surprise. Constantinople was the city above all others for the cultivation of the arts connected with luxury, and we have already remarked that it was from Constantinople that Italy sent for goldsmiths, founders and chasers, whenever, at the end of the Xth century, and at the beginning of the XIth, any large piece of metal-work was to be executed.

Besides, the Eastern empire and Italy were then in close political and commercial relation. Cicognara remarks, that the presents made by the emperors and Greek patriarchs in Italy of pieces of goldsmith's work, for ecclesiastical use, revived in that country a taste for ornaments executed in materials of gold and silver.*

In Germany, a different cause produced the same results. The marriage of Otho III. with the Greek princess Theophania (972), naturally attracted Byzantine artists to the court of that emperor. These introduced into Germany the style of their school, which was quickly adopted by the various arts, at that time endeavouring to strike out into new paths.

* Cicognara, *Stor. della scult.*, t. i. p. 399.

Of this we find a proof in several monuments of this period still existing in Germany. Thus, the Royal Library at Munich contains an Evangeliary brought from the abbey of St. Emeran at Ratisbon. It was written in 870 by the brothers Berengarius and Luithardus, by order of Charles the Bald, whose portrait is given in one of the miniatures that ornament the book. This precious volume has been overlaid,

Fig. 74. Golden Altar frontal of Bâle. XIth century. Musée de Cluny.

in the reign of Otho II., with a rich cover of gold ornamented with repoussé figures; in the centre, in an oblong frame, enriched with carbuncled gems and fine pearls, Christ is represented in an aureola,* the rest of the field is covered with well-drawn bas-reliefs, remarkable for the fineness of the execution. Notwithstanding the inscriptions on this specimen being written in Roman capitals, one cannot fail to recognise the hand of a Byzantine, such correctness of proportion and

* *Aureola.* An enlarged nimbus. The nimbus encircles the head, the aureola, the whole body. This kind of nimbus is sometimes termed "Vesica Piscis," the "divine oval," the "mystical almond." These names are incorrect, for the aureole varies in form. When the person is seated, the aureola is circular, and sometimes in the form of a quatrefoil. The aureola is not found in the catacombs—it is of later invention than the nimbus. The nimbus and the aureola united form a glory.

symmetry of the figures being confined at that period to the best artists of the Greek school.

When, therefore, Henry II. (1003 † 1024) was elevated to the imperial dignity, he found several Greek artists established at the German court. We know that the great piety of this prince induced him to present the churches with pieces of gold-work of the highest importance, some of which are still extant. The finest of these is the golden tabula,* or decorated altar-front, given by him to the cathedral of Bâle (Fig. 74), and which was sold by auction, some years since, at the time of the separation into two Cantons of the town and territory of Bâle. This altar-front, nearly six feet wide, forms a Romanesque arcade, whereof each of the five arches, supported by light clustered columns with scaphoïd,† or cushion-shaped capitals, forms a niche containing a figure of Christ in that of the centre, the archangels Michael, Gabriel, and Raphael, and St. Benedict in the others; Jesus gives the benediction with the right hand, and in the left he holds a globe, upon which is engraved his Greek monogram between alpha and omega. The emperor Henry, and his wife Cunegunda, are kneeling at the feet of the Saviour. The whole is executed in hammer or repoussé work in high relief.‡ The style of this monument differs essentially from that of the Paliotto of St. Ambrose at Milan. The traces

Fig. 75. Silver reliquary head or "chef," from the Cathedral at Bâle. XIth century.—British Museum.

* The word *table*, according to its ancient signification, denoted a level, expanded surface; in fact, a flat piece of board. In like manner, any construction for superficial decoration, such as the front of an altar, was termed *tabula* or *tablementum*.

† *Scaphoïd* from σκαφη, vessel, boat, and ειδος like; having the form of a boat.

‡ M. Du Sommerard, *Album*, 9th series, pl. xii, has given an engraving of this monument.

of ancient art have here completely disappeared; the long figures of the Saviour, of the angels and the saint, stiff, solemn, and isolated, under the arches that enclose them, are stamped with a decidedly Byzantine character.

Among the other specimens of metal-work which we owe to Henry II., we have pointed out already, in treating of enamels, the beautiful covers of manuscripts in the Royal Library of Munich; we have also to cite two other remarkable examples: the crown of gold of the sainted emperor and that of the empress his wife, preserved in the treasury of the King of Bavaria. The crown of the emperor, especially, is characterised by a severe style. This crown, in joints, is composed of six similar pieces, which form together a circle of gold about $3\frac{1}{8}$ inches high, surmounted by six archaic fleurs-de-lis; six figures of winged angels placed upon spheres rise above the articulations, cabochons symmetrically arranged enrich the ground, upon which runs a foliage artistically chased. The crown of the empress is also composed of six articulated pieces, from the centre of which rises a kind of stalk with four leaves. These beautiful pieces give a high idea of the goldsmith's art at the beginning of the XIth century.

Moreover, a taste for objects in metal-work was at that time diffused over all Germany, and a large number of prelates followed the example of the Emperor Henry. Among those who caused magnificent monuments to be executed, must be recorded Willigis, archbishop of Mayence († 1011), who gifted his church with a crucifix of gold of 600 lbs. weight; the figure of Christ was so admirably fitted together that all the limbs could be made to move at their joints: the eyes of the Redeemer were formed of precious stones.* We must mention also Bernward,† bishop of Hildesheim († 1022) himself a proficient in the goldsmith's art; some pieces still existing in the treasury of the cathedral of Hildesheim, a crucifix in gold enriched with gems and filagrees, and two candelabra are attributed to him. When we see Germany producing such magnificent specimens as these, the eulogiums awarded to that country by Theophilus, for its works of gold

* Vel Weter, *Gesch. u. Beschr. des domes zu Mainz*, S. 155.
† Kugler, *Handbuch der Kunstgeschichte*, S. 487.

and silver,* can no longer be a matter of surprise. The goldsmith's art was, about the same time, much patronised by Robert, King of France, who richly endowed with its productions a number of churches and monasteries he had founded.† The French, less conservative than the Germans, have kept nothing of their ancient metal-work. We are however, inclined to refer to this epoch, one so flourishing for the art of which we are treating, the beautiful box of the Museum of the Louvre, of which mention has already been made in our chapter upon enamels.‡ The golden bas-relief, and the general character of the box, appear to be of French origin, but the enamels added to its decoration, and set in the same manner as the cabochons that accompany them, are evidence of Greek workmanship.

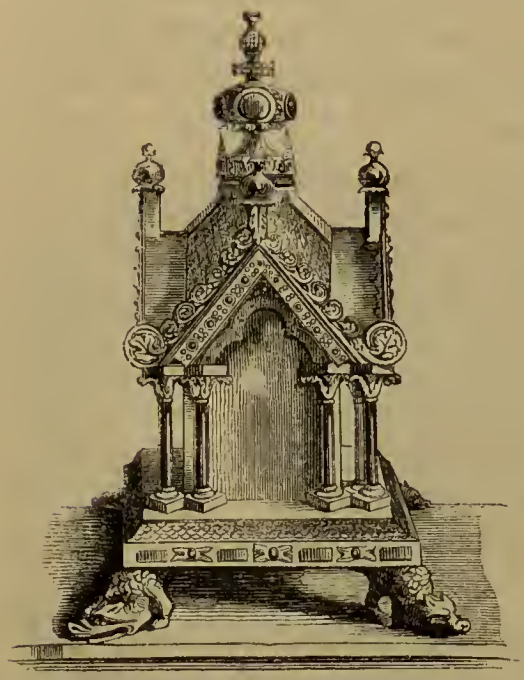


Fig. 76. Reliquary (châsse), copper-gilt. XIth century. Coll. Soltykoff.

The impulse given to the goldsmith's art at the beginning of the XIth century, by the Emperor Henry, and by king Robert, was far from slackening after their death. Sacred vessels of gold and silver, shrines (Fig. 76), becoming more and more necessary from the quantity of relics brought home by the crusaders, altar fronts, magnificent book-covers, in short, all the adjuncts of religious worship, were multiplied in the course of the XIth and XIIth centuries. It would take too long to enumerate all the princes and prelates who enriched the churches with sumptuous pieces of plate. We cannot, however, refrain from mentioning Suger (†1152), Abbot of St. Denis, minister of Louis le Gros, and regent of the kingdom under Louis VII. He was not deterred by the cares of office from giving his

Goldsmith's work of the XIIth and XIIIth centuries.

* Theophili, *Diversarum artium schedula*, præfat.
† Du Chesne, *Helgadi Epitome vitæ Rob.*, t. iv. p. 63.
‡ Page 112.

attention to the arts, of which he was a zealous patron. Applying to himself alone the austerity practised by St. Bernard, he added to the treasury of his abbey church many valuable pieces of workmanship, described in his book, "De rebus in administratione suâ gestis."* It is certain that if Suger had not, in his elevated position, been enabled to withstand the exaggerated censures of St. Bernard, the effect would have been the ruin of all the arts, thus crushed in the bud, since, owing to the spirit and manners of the times, the Church alone could afford a field for their development.

Another individual deserving of particular mention, is Theophilus, of whom we have already spoken so often. This writer, a simple monk, "humilis presbyter, indignus nomine et professione monachi," as he styles himself, but an eminent artist, has left us in his "Diversarum artium schedula," a treatise containing the technical processes of almost all the industrial arts of his time. Seventy-nine chapters of the third book are devoted to the goldsmith's art. A perusal of this treatise will enable us to estimate the variety of information required by a goldsmith in the XIIth century.

In consulting only the list of tools with which Theophilus enjoins the goldsmith to furnish his workshop, we see that he was expected to know how to grave his metals with burins and scalpers,† to execute bas-reliefs and figures in repoussé work, and afterwards to chase them; ‡ he must, himself, be able to compose the "nigellum" for filling the incisures of his fine engravings, § and to make the cloisonné enamels, with designs in gold, mixed alternately with gems and pearls in the ornamentation of sacred vessels; nay, further, it was necessary that he should be a skilful modeller in wax, and know how to cast figures in full relief intended for the decoration of his pieces,‖ and the handles in the form of dragons, birds or foliage, which he would adapt to his vases.¶

* Du Chesne, *Hist. Trans. script.*, Lut. Paris, 1641, t. iv. Félibien may also be consulted upon the riches of the Treasury of St. Denis, going back to the time of Suger. *Hist. de l'abbaye de St. Denis.*, Paris, 1706.

† Cap. xi. *De ferris fossoris*, cap. xii. *De ferriis rasoriis*, the scraping or edging instruments to remove the rough edges that the burin, in cutting the copper, leaves on both sides of the incisure.

‡ Cap. xiii. *De ferris ad ductile*, cap. lxiii. *De opere ductili.*

§ Capp. xxvii., xxviii. ‖ Cap. lx. ¶ Cap. xxx.

After having described the utensils necessary to the goldsmith, Theophilus enters on the technical part of the art, and selecting, as examples, the most important pieces of church plate, gives instructions for making the chalice, the cruet, and the censer. This engraving, chasing, and sculpture, these nielli, these enamels of which Theophilus explains the processes, were only adapted for vessels of high price to which none but the nobles, prelates, and rich communities could aspire; but the master forgets nothing; his treatise is complete. To accommodate persons of moderate fortunes he teaches the manner of making pierced works,* of impressing silver and copper with stamps,† nor does he even overlook the poor in treating of the decoration of books.‡

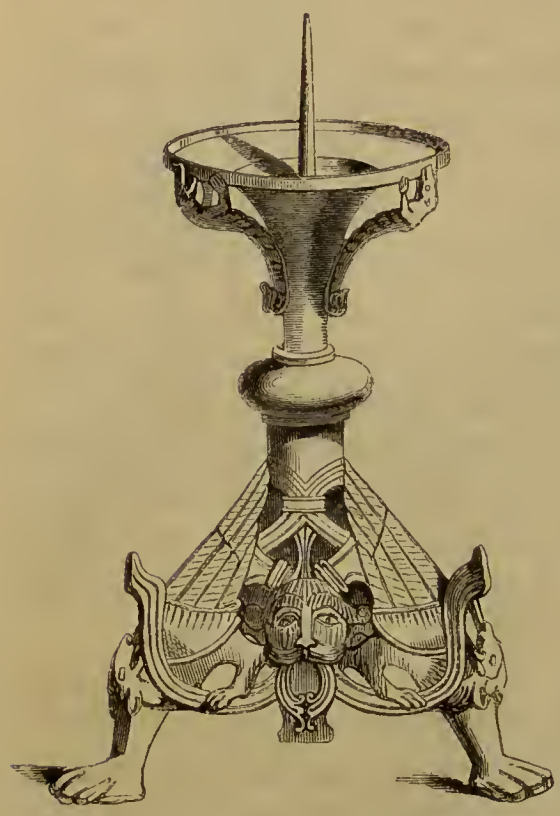


Fig. 77. Candlestick. XIIth century. Musée de Cluny.

We have already described the peculiar character of the church plate of the XIth and XIIth centuries. The XIIIth deviated little as to general form, from this noble and severe style. For three centuries, the chalices have large, wide-brimmed cups, resting upon a circular foot, the diameter of which exceeds, sometimes, that of the cup; the shrines are made in the form of a church or tomb, with a prismatic cover; the crosses, the covers of sacred books, are enriched with gems, with figures in relief, with fine engravings, with nielli, and enamels; very frequently a bas-relief of ivory, belonging to an ancient diptych, occupies the centre of the book-covers; precious stones and enamels form a border which serves the purpose of a frame,§ the censers of

* Cap. lxxi. *De opere interrasili.* † Cap. lxxiv. *De opere quod sigillis imprimitur.*
‡ Cap. lxxi. *Ex his ornantur etiam libri pauperum.*
§ The covering of the Latin MS., no. 662 of the Imperial Library, offers a fine example of this kind of decoration.

spheroïdal form, are surmounted with edifices or figures. In the XIth, and until even nearly the end of the XIIth century, the decoration of sacred vessels, consisted principally of precious stones, pearls, and cloisonné enamels inserted in a groundwork of golden filagree. The beautiful golden chalice preserved in the Cabinet of Medals of the Imperial Library, affords a magnificent specimen of this style of ornamentation. In the XIIIth century, the preference was given to bas-reliefs, and embossed and chased ornaments, nielli, incrusted enamels, and engravings with the burin nielloed with coloured enamels. The progress made in the art of design may be considered as one of the causes that had directed the public taste towards this style of decoration.

Fig. 78. Copper censer. XIIth century. Lil

It is, however, only the inspection of existing specimens, or at least of good drawings, that can serve to give any exact idea of the brilliant metal-work of these periods.

To the fine pieces already noticed, we may still add a few deserving the attention of amateurs: the chalice of the Abbey of Weingartein in Swabia,* which bears the signature of the artist, "Magister Cuonradus de Husa;" in the treasury of the Cathedral at Ratisbon, a fine cross enriched with precious stones, another cross ornamented with nielli, and a chalice ornamented with busts of saints, executed in repoussé work upon the foot, and enamelled medallions upon the knop; in the treasury of the cathedral of Mayence, a fine chalice; at the Cathedral of Aix-la-Chapelle, the magnificent shrine of Notre-Dame,

* D'Agincourt, *Hist. de l'art Sculp.*, pl. xxix. t. iii. p. 25.

presented by Frederick Barbarossa; * at the Museum of the Louvre, the shrine of Charlemagne, published and described by M. Adrien de Longpérier; † in the Riche Chapelle of the King's palace at Munich, a portable altar in gold, of the XIIth century, enriched with precious stones "en cabochon;" in the Cathedral of Cologne, the shrine of the three kings; at Deutz, the shrine of St. Héribert; at the Musée de Cluny,‡ some candlesticks of the end of the XIIth century (Fig. 77); in the collection of M. Beuvignat, architect of the town of Lille, a very curious censer of the XIIth century (Fig. 78); at the Library of the Vatican, a magnificent censer in the form of a circular, two-storied chapel, of the XIIIth century; § a German chalice of the same epoch, published by M. Didron from an ancient drawing; ‖ at Evreux, the shrine of St. Taurin; at Rouen, that of St. Romain.

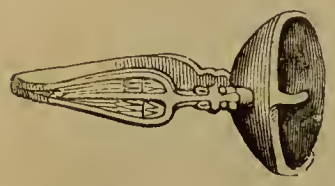


Fig. 79. Episcopal ring, gold, with sapphire, French work, of XIIIth century. In the collection of Lord Londesborough.

There exists, as we see, a considerable number of specimens of ecclesiastical metal-work of the XIIth and XIIIth centuries. But jewels are much more rare, (Fig. 79.) The form of the reliquary (Fig. 76), is remarkably elegant, and the copper-plates of which we have given two specimens, (Figs. 44, 45, p. 98), are valuable, not only as works of art, but also as exhibiting important evidence of the Christian symbolism of the period.

French goldsmith's work of the XIVth century.

The goldsmiths we have hitherto named, are, with few exceptions, monks, and the pieces of metal-work described have all an ecclesiastical character. At the beginning of the XIVth century, art emerged from the cloisters and took a wider range; the goldsmith's art from that period was no longer employed exclusively in the service of the Church, but in that also of rich and noble individuals. Soon luxury made such progress that restrictive laws appeared necessary. An ordinance of 1356, issued by King John, prohibited goldsmiths "d'ouvrer

* Published by the Abbé A. Martin.
† *Revue Archaeologique*, t. ii. p. 525.
‡ *Annales arch.*, t. iv. p. 1.
§ Pistolesi, *Il Vaticano descritto*, t. iii.
‖ *Annales arch.*, t. iii. p. 206.

vaisselle, vaisseaux, ou joyaux de plus d'un marc d'or ni d'argent, si ce n'est pour les églises." But these ordinances were powerless against princes, whom they on the contrary favoured, by giving to them alone the right of possessing a considerable quantity of plate.

It would be very interesting to possess in the present day some of these fine pieces of gold and silver plate, with which the table and the "dressoirs" of the nobility were then loaded, but all has disappeared, and we do not know of one specimen remaining; it is but seldom even that we meet with those jewels (Fig. 80), which they used for enriching their clothes and decorating their head-dresses.

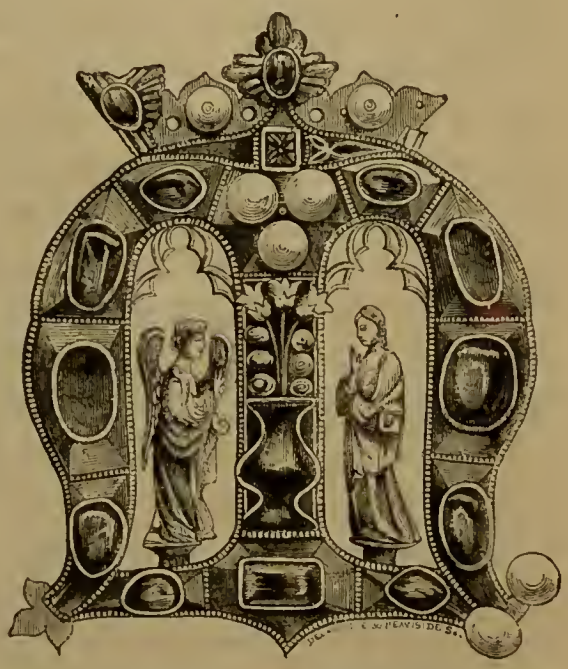


Fig. 80. Monogram of the Virgin. Jewelled ornament of the precious mitre of William of Wykeham. XIVth century. New College, Oxford.

It is, however, easy to conjure up visions of all these riches by means of the very detailed and well written inventories of two of the richest princes of that age: Charles V. and his brother, the Duke of Anjou, King of Naples and Provence. The inventory of the Duke of Anjou especially, possesses this remarkable peculiarity, that, although very voluminous, it is dictated by the prince himself, drawn out by him, and signed with his hand.* The royal editor does not confine himself to a dry enumeration of the objects in his treasury, but considering them as so many specimens of art, he describes them with the minuteness and enthusiasm of an amateur. The love of art, however, does not make him unmindful of their intrinsic value; he has the precaution of causing all the gold and silver he possesses to be weighed, and he thus with his own hand terminates his singular catalogue:—"Del'or que Henry, notre orfévre, a pour la grant nef que il fait comte

* MS. Bibl. roy., *Suppl. français*, no. 1278, dated from the beginning of 1360.

aveques luy, ou mois de mars l' an M. CCC. LXVIII. fu trouvé que il avoit CCC. XLVIII. M. (marcs) au M (marc) de Troyes."

"De l' or en vesselle a en la tour pesé et assommé ou dit mois et an IX.cc LX. (960) M au M de Troyes. Somme de l' or XIII.cc VIII. (1308) M. au dit pois."

"La vesselle d' argent qui est en la tour et devers nous courant par nostre hostel, ou-dessus dix moys et an pesée et assommée monte VIIIm XXXVI. (8026) M au marc de Troyes." And lower down: "LOYS."

The inventory of Charles V.* begun in 1369, comprises much more considerable riches. His treasure was estimated at nineteen millions. The Duke of Anjou, in order to satisfy his passion for works of the goldsmith, wished to seize it upon the death of the king his brother; † and although foiled in his first attempt he succeeded later in laying hands upon it. The inventory of the treasury of Charles VI.‡ of 1399, is very meagre compared with that of his father.

The descriptions contained in these old documents, will enable us, as we have already said, to give a very exact idea of this French metal-work of the XIVth century, which was so much esteemed and sought after throughout all Europe.

It will be seen from the quotations we are about to make, that the artists of that period indulged in strange flights of fancy in designing plate for the table; they especially delighted in grotesque subjects: a ewer and a cup may be often seen in the shape of a man, animal, or flower; while a monstrous combination of several human figures serves to form the design of a vase.

Let us transcribe literally some of the articles of these inventories:—

"Un coc faisant une aiguière, duquel le corps et la queue est de perle et le col, les elles et la teste est d' argent esmaillié de jaune, de vert et d' azur, et dessus son doz a un renart qui le vient prendre par la creste, et ses piez sont sur un pié esmaillié d' azur à enfans qui jouent à plusieurs gieux." §

* MS. Bibl. roy., no. 8356.
† M. de Barante, *Hist. des ducs de Bourgogne*, t. i. p. 190.
‡ MS. Bibl. roy., no. 2068, fonds mort., no. 76.
§ *Inventaire du duc d'Anjou*, folio 15.

(Description of an ewer) "Un homme estant sur un entablement, lequel entablement est esmaillié d' azur à gens à cheval et à pié qui chacent aux cerfs, et est ledit homme emmantelé d' un mantel esmaillié, et en son bras destre a bouté son chaperon duquel la cornete fait biberon (spout) à verser eaue." *

"Une petite aiguière d'or à façon de rose, et est le biberon d' un dalphin (dolphin) et le fruitelet (knob of the cover) d' un bouton de rose." †

The ewer often carries or contains the goblets:—

"Une grant aiguière toute dorée . . .; dedans ladite aiguière a VI. gobelets." ‡

"Un griffon estant sur une terrasse à souages et orbesvoies, laquelle portent quatre lyonceaux gisans, et dessus le dos dudit griffon, entre ses esles, a une royne emmantelée qui tient par les esles une epentèle qui fait biberon à get court, et derrière le dos de ladite royne est le siége d' un gobelet." §

Many of these chalices, cups, and hanaps, are no less whimsical in form. "VI hennaps d' or pareilz à une rose." ‖

"Quatre petites tassetes d'or qui ont chacune deux oreilles, esquelles a une dame qui tient en sa main deux penonceaulx." ¶

"Ung hanap de cristal a couvescle garny d' argent, que porte ung porteur d' affentreure, et est le fritelet d'un brotier qui maine une broete où est un homme malade." **

The inventive genius of the goldsmiths was also exercised upon saltcellars:—"Un homme séant sur un entablement doré et sciselé, lequel homme a un chapeau de feutre sur sa teste, et tient en sa destre main une salière de cristal garnie d' argent et en la senestre un serizier garni de feuilles et de serizes à oizelez (oiseaux) volans sur les branches." ††

"Une salière de une serpent volant à esles esmaillées, et darrière sur son dos a un petit arbre à feuilles vers, et dessus a un chandelier que deux singes, pains de leur couleur, soustiennent, et dessus le chandelier a une salière esmaillée, et sur le couvecle a un frettel aux armes d' Estampes." ‡‡

* *Inventaire du duc d'Anjou*, fol. 77.
‡ *Inventaire du duc d'Anjou*, fol. 26.
¶ *Inventaire de Charles* V, fol. 51.
†† *Inventaire du duc d'Anjou*, fol. 91.
† *Inventaire de Charles* VI., fol. 212.
§ Ibid. fol. 77.
‖ Ibid. fol. 80.
** Ibid. fol. 265.
‡‡ Ibid. fol. 92.

"Une salière d'or en manie de nef garnye de pierreries, et aux deux bouts a deux daulphins et dedens deux singes qui tiennent deux avirons." *

"Une salière d'or que tient ung enffant sur ung cerf couronné de pierreries." †

We have seen what an enormous quantity of gold the Duke of Anjou had delivered to his goldsmith for the purpose of making him a "nef;" ‡ the piece of plate in which the nobility of those days displayed the greatest luxury. The nef was a kind of box in the form of a ship, which was placed upon the table of a sovereign or great person; it had a lock to it, and served to contain the goblet and various other utensils for the owner's private use.§ The following are descriptions of some of these pieces: "La navette d'or goderonnée, et mect-on dedens, quant le roy est à table, son essay,‖ sa cuillier, son coutelet et sa fourchette."

"Une grant nef d'argent dorée séant sur vi. lyons, et à chacun bout a ung chastel où il y a ung ange, et est le corps de la nef tout semé d'esmaux armoyé de France." ¶

We conclude the description of this table plate, with that of a curious fountain comprised in the inventory of the Duke of Anjou. "Une très grant fontaine que xii. petis hommes portent sur leurs espaules, et dessus le piè sont vi. hommes d'armes qui assaillent le chastel, et il y a vi. ars bouterez en manie de pilliers qui boutent le siége du hanap. Au milieu a un chastel, en manière d'une grosse tour à plusieurs tournelles, et siet ledit chastel sur une haute mote vert; et sur trois

* *Inventaire du Charles* V. fol. 41. † Ibid. fol. 41.

‡ *Nef.* Les rois avaient, pour renfermer leur couvert, ce qu'on appelait un nef, ou cadenas, à cause des a forme de vaisseau; ou y mettait couteau, cuillière, hanap, servietta curedent, &c. Millin.

§ "Navis potest sumi pro eo quod in aulis principum *nef* vocant, abaci scilicet argentei specie in navis formam confecti, in quo vasa ad potum reponuntur in ipsa interdum mensa." Du Cange, *Glossarium ad script. mediæ et inf. lat.*

‖ The name of *essai* was given to a fragment of the horn of the narwhal which, at that time, passed for the horn of the unicorn, to which was attributed, among other virtues, that of neutralising and detecting the presence of poison. Various authors, Bartholinus, Baccius, Catelanus, relate that it became agitated when placed in contact with a poisoned body, and the most efficacious antidote to poison was the water in which it had been steeped. The essai was attached to a chain of gold, in order that it might be plunged into a dish, without putting in the fingers. Among the plate of Charles I., after his defeat, was found his silver *nef*, containing a salt-cellar, within which was another smaller vase, containing the knife of the prince and his essai.

¶ *Inventaire de Charles* V., fols. 87, 130.

portes a trois trompettes, et au bas, par dehors ladite mote a baties crénelées, et aux créneaux du chastel, par en haut, a dames qui tiennent bastons et escuz et deffendent le chastel et ou bout du chastel a le siége d'un hannap crénelé." *

All these pieces of goldsmith's work were enriched with subjects executed in fine enamelled chasings. The quotations given in treating of translucid enamels upon relief,† will show that the subjects were no less whimsical than the pieces they served to decorate.

But the luxury thus displayed in plate for the service of the table had not the effect of entirely diverting the art from ecclesiastical purposes. We find in the inventories whence we have just made some extracts, and in those of the Duke of Normandy in 1363, ‡ of Charles VI., of 1399, § magnificent works of this kind:

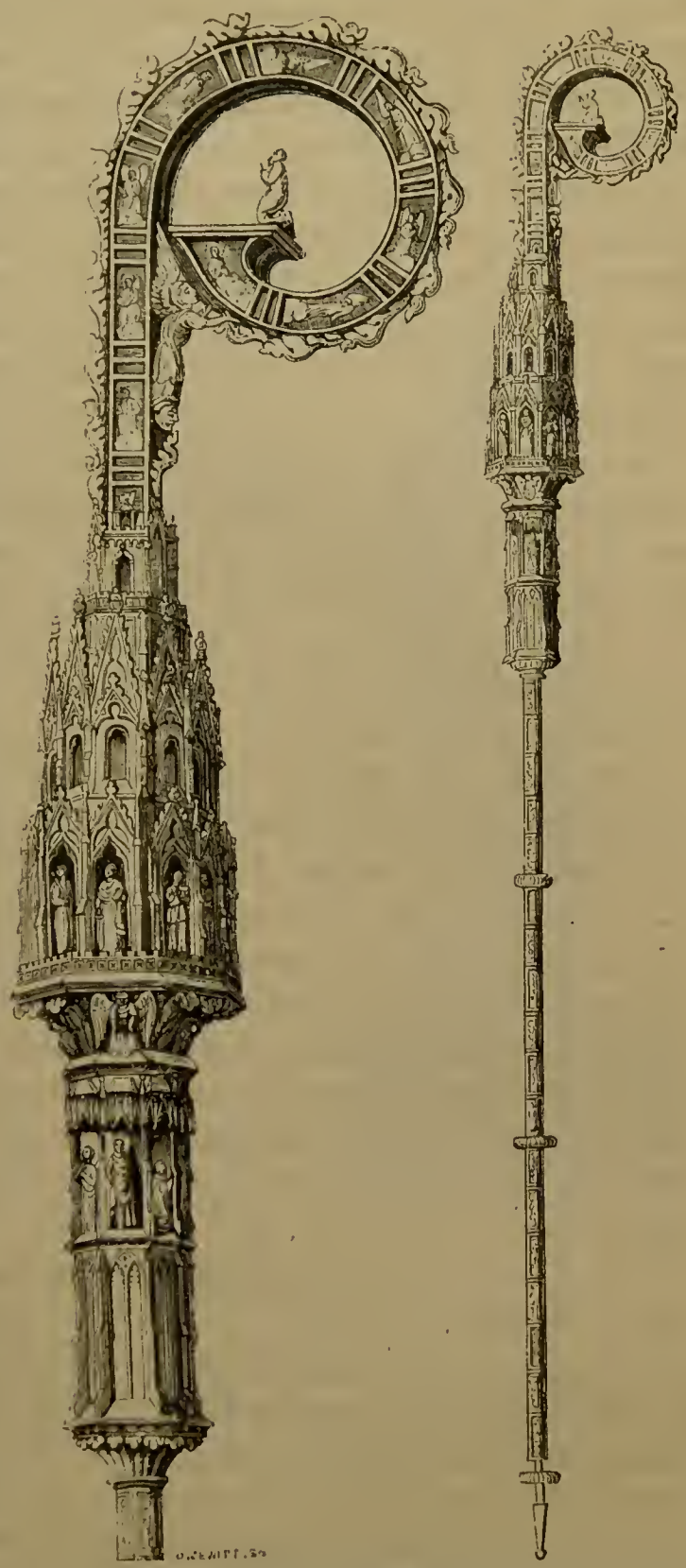


Fig. 81. Crozier of William of Wykeham, Bishop of Winchester XIVth century. New College, Oxford.

* *Inventaire du duc d'Anjou*, fol. 77.
† MS. Bibl. roy., no. 2053, fonds mort., no. 74.
‡ See page 157.
§ MS. Bibl. roy., no. 2068, fonds mort., no. 76.

sacred vessels of gold, enriched with enamels and precious stones; crosses richly ornamented, croziers (Fig. 81) of silver gilt, loaded with pearls and precious stones, with figures in full relief in the centre of the "crosseron;" cruets, the covers of which terminate "en façon de mictres;" missals, of which "les aiz sont d' argent dorez à ymages en levez" (repoussé); breviaries, covered "de veluiau brodé à fleurs de lys dont les fermouers d'or sont esmaillez auz armes de France;" a hand-bell of gold, *hachée à ymages* (incised) of which "le tenon est de deux angeloz qui tiennent une fleur-de-lys couronnée." *

The chalices are no longer broad-brimmed cups, with a wide circular foot, as in the XIIth century; the cups take a semi-ovoid form, and the feet are shaped out in lobes. We find in the "Histoire de l'abbaye de Saint-Denis" by Félibien, the engraving of a chalice given to the church of that abbey by Charles V., which shows us the form of the chalices of this period.†

Figs. 88, 89, 90, (p. 246), represent two cruets and a chalice of the XIVth century, the feet of which are cut out like those of the chalice of Saint Denis.

The censers in the inventories of the Duke of Anjou and Charles V., still preserve the forms enjoined by Theophilus; ‡ they are thus described:—

"Ung grant encencier d'or pour la chapelle du roy, ouvré à huit chapiteaulx en façon de maçonnière, et est le pinacle dudit encencier ouvré à huit osteaulx et est le pié ouvré à jour."

"Ung encencier d'or à quatre pignons et à quatre tournelles." §

This form of censer, representing an edifice, continued long in fashion.

The reliquaries in the form of churches were restricted in the XIVth century to cathedrals; for chapels and oratories the preference was given to statuettes of gold and silver made to enclose relics, and which gave the artist-goldsmiths a better opportunity for displaying their talent in sculpture. Some of the reliquaries are thus described:—

* *Inventaire de Charles* V., folios 29 to 34, 89, 107, 125, 126, 127, 240.
† *Hist. de l'abbaye de St. Denis*, Paris, 1706, p. 544, pl. iv.
‡ *Diversarum artium schedula*, caps. lix., lx.
§ *Inventaire de Charles* V., fol. 33.

"Ung ymage d'or de saint Jehan l'Euangéliste, tenant ung reliquaire où est une grosse perle." *

"Douze ymages des douze appostres d'argent doré, tenant reliquaires en une main, et en l'autre espées, glaives, bastons, et cailloux, assis chacun sur un entablement d'argent doré esmaillè des armes de France." †

This description of reliquary was continued in the XIVth and XVth centuries. Independently of figures formed to contain relics, the inventories we analyse contain a considerable quantity of statuettes of the Virgin and saints in gold and silver, among which are some of great value, such as these:

"Ung ymage de Notre-Dame, dont le corps d' icelle et de son enffant sont d' or, une couronne garnye de pierrerie, a ung fermail en la poictrine, et le dyadesme da son enffant garny de perles, et tient en sa main ung fruitelet par maniere de ceptre où il y a ung gros saphir, et poise quarente marcs tant d'or comme d'argent, c'est assavoir l'ymage treize marcs d'or et l'entablement poise environ vingt-sept marcs d'argent." ‡

Fig. 82. Statuette of the Virgin XIV thcentury. Louvre.

"Ung ymage d'or de la Trinité tenant une croix brousonnée où le crucifix est dessus, assiz en une chayère que soustiennent six aigles, et est garny de vingt-huit perles, de seize saphirs et quinze balaiz pesant huit marcs quatre onces." §

We sometimes meet with caricatures; such as this for example:—"Un singe d'argent doré estant sur une terrasse . . . lequel singe a une mictre d'évesque sur la teste azurée . . . et en sa main senestre tient une croce et a un fanon ou bras, et de la destre main donne la béneyçon, et est

* *Inventaire de Charles* V., fol. 218.
‡ Ibid. fol. 23.
† Ibid. fol. 97.
§ Ibid. fol. 218.

vestuz d'une chazuble dont l'orfroy d'entour le col est esmaillié d'azur." *

At Paris, are many fine specimens of this sculptured metal-work belonging to the XIVth century. At the Museum of the Louvre, among other pieces:—

First, a silver gilt statuette of the Virgin holding the Infant Jesus (Fig. 82); it was given in 1339 to the Abbey of St. Denis, by Jeanne D'Evreux, Queen of France, widow of Charles le Bel, as we learn from the inscription engraved in the characters of the time. The pedestal which supports this statuette is divided into compartments, representing scenes of the life and passion of our Saviour; the figures are in relief, finely engraved upon the metal, the ground is of semi-translucid blue enamel. This kind of work bears a great analogy to those Italian enamels which surround the silver nielli, and of which we have spoken already in treating of enamels.†

Second, two angels holding reliquaries; these statuettes in gold have the carnations coloured.

Third, a reliquary in gold of about a foot high, resembling a kind of portico in the gothic style, decorated with ten niches, containing enamelled figures of Christ, the Virgin, and male and female saints; rubies, sapphires, and pearls, mounted "*à griffes*," (that is, secured in the collet with clamps, like the claw of a bird,) are distributed over the whole extent of the piece.‡

In the Imperial Library are to be seen the covers in gold of four manuscripts (fonds Saint Victor, No. 366, and Suppl. Latin, Nos. 663, 665, 667). The two first of large quarto size, represent on one side the Crucifixion, and on the other Christ seated and giving the benediction; the third, small folio, represents upon one of the panels the Crucifixion, and on the other, the Resurrection. These subjects are executed in hammer-work in high relief. The heads

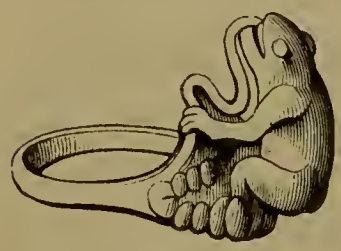


Fig. 83.—Magical ring worn on the thumb. Gilt. German. XIVth century. Coll. Londesborough.

* *Inventaire de duc d'Anjou*, fol. 14.

† See above, p. 147.

‡ The stone in fig. 79, p. 222, is set "à griffes."

are full of character and expression, the drawing is generally correct, and the execution admirable. The fourth cover encloses a Carlovingian manuscript. Charles V. caused it to be made when he gave the manuscript to the Sainte-Chapelle. It is one of extraordinary richness. On the upper panel, the artist has reproduced one of the miniatures of the manuscript

Fig 84. Morse or clasp for a cope, in silver gilt, enriched with enamels and precious stones. XIVth century. Coll. Soltykoff.

in a fine nielloed engraving, on a fleur-de-lis ground. On the lower panel, he has represented the Crucifixion in figures of high relief, enclosed in a double frame enriched with precious stones.*

Jewels of the XIVth century are even more rare than the larger specimens of the goldsmith's work (Fig. 83).

* According to Geromo Morand, the book-cover weighs in all eight marcs of gold. *Hist. de la Sainte Chapelle*, p. 49.

The Cabinet of Medals of the Imperial Library contains a very fine antique cameo, in agate onyx, representing Jupiter,* the setting of which is of the time of Charles V., as we learn from an enamelled inscription surmounting an escutcheon bearing the arms of France "ancient":—"Charles, roi de France, fils du roi Jehan, donna ce joyau, l' an M CCC LXVII. le quatre de son règne." The setting of the cameo bears an inscription in gold, upon an enamel ground consisting of the first words of the Gospel of St. John. In the XIVth century, Jupiter with his eagle passed for the beloved disciple of Christ, and it is doubtless, thanks to this metamorphosis, that this cameo bearing his image was used to decorate some reliquary. Fleurs-de-lis and two dolphins chased in relief, of good taste and careful execution, are placed at intervals upon the border of the cameo.

Specimens of the XIVth century are too rare to enable us to form a complete idea of the jewellery of that period, we are therefore obliged to have recourse to the descriptive inventories from which we have already given so many extracts.

The jewels most often mentioned in these inventories, are clasps, belts, and small portable reliquaries.

The "morses" or clasps for copes and mantles receive the names of fermaille, fermillet,† mors de chape, pectoral à chape, according to their size and use. We give some description of this kind of jewel:—"Un fermail d'or où il y a un paon.‡—Une fleur-de-liz d'or en manière de fermail.§—Ung fermillet d'or azuré à deux mains qui s'entretiennent." ‖

"Ung pectoral à chappe en façon de lozenge, ouquel il y a ou mylieu ung grant camahieu ouvré de petiz ymages, et est garny de six saphirs, deux ballaiz, XLII perles et d' autre grosse pierrerie." ¶

* See woodcut, fig 21, p. 52, for a representation of this jewel.

† Fermillet, diminutive of fermail. The "*Fermaillers*" formed one of the numerous corporations of Paris, so great was the fashion for this kind of jewel, and so many workmen were employed in making them. Several councils forbade their use, and one of the rules of the Anabaptists is to wear no clasps to their clothes, doubtless originally a sumptuary law.

‡ *Inventaire du duc de Normandie*, MS. Bibl. roy., no. 2053.

§ *Inventaire de Charles* V., fol. 16. ‖ Ibid. fol. 19.

¶ Ibid. fol. 250.

"Ung aigle d'or en manière d' ung pectoral pour mors de chappe garny, c'est assavoir de dix-huit ballaiz, quatre grosses esmeraudes." *

Fig. 84, represents one of this kind belonging to the XIVth century. The eight medallions in rock-crystal round the edge enclose relics.

The belts which receive the name of "demi-ceint," when they have not the necessary dimensions to enclose the waist, are almost all formed of silk tissue, velvet, or gold lace, loaded *ferré*, as it was called, with little pieces of metal-work. The "boucle," the "mordant" and the "passant," are always enriched with nielli, enamels, or precious stones. They are thus described:—"Ung seincture sur tissu vert, ferré d'or." †

"Une petite seincture, qui fut à la royne Jehanne de Bourbon, assize sur bizecte, dont la boucle et le mordant sont d'or et garniz de perles." ‡

"Un demy-seinct ferré d'or." §

"Une seincture (pour le corps du roy) de soye vermeille, a boucle et mordant d' or; la mordant neellé aux armes de France, et le passant et les fermillières d'or." ‖

"Une seincture d'or, à pierreries, sur ung orfroiz d'or trait à cinquante six clous de deux façons. . . ¶

"Ung tissu de soye ardant, garny de boucle, mordant et huit ferrures d'or, et y pend ung coutel, unes forcettes et ung canivet garny d' or." **

These belts "ferrées" with metal-work are perfectly known by the miniatures in the manuscripts of the XIVth and XVth centuries.

There were also belts entirely of gold and silver for the women:—"Une seincture longue, à femme, toute d' or, à charnières garnye." ††

The taste for belts with joints entirely of gold and silver continued to prevail until towards the middle of the XVIth century.

The little portable reliquaries and jewels, with sacred subjects, are described in the inventory of Charles V. under the

* Ibid. fol. 125. † *Inventaire du duc de Normandie.*
‡ *Inventaire de Charles* V., fol. 12. § Ibid. fol. 13. ‖ Ibid. fol. 16.
¶ Ibid. fol. 15. ** Ibid. fol. 78. †† Ibid. fol. 243.

title of "Petiz joyaulx et reliquiaires d'or pendans ou à pendre." * We give the description of some:—

"Ung petiz crucifiement d'or où est Notre-Dame et saint Jehan assiz sur ung entablement. . .

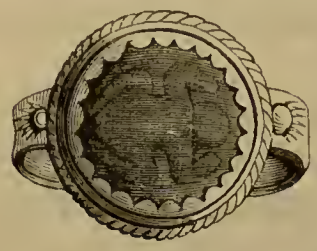


Fig. 85. Toad-stone ring,† silver. XVth century. Coll. Londesborough.

"Ung petiz ymage d'or de Notre-Dame, assiz en une chayère où sont dix perles, troys saphirs et ung balay.

"Ung joyau fermant à deux elles, ou dedens est Notre-Seigneur yssant du sépulcre, et sur les dites deux elles ou portes sont deux saphirs, deux ballaiz et quatre crochetz au-dessus, sur lequel ung saphir et plusieurs perles, et est le pié garny de cinq esmeraudes, cinq rubis d' Alexandre et dix perles.‡

"Ungs petiz tableaux d'or, ouvrans de troys pièces, où est la Trinité, et aux costés Notre-Dame et saint Jehan.§

"Ung petit ymage de saincte Agnès qui est dedeens ung tabernacle d' or pendant à une chesne." ‖

Again, we find in the inventories from which we have already made so many extracts, a considerable number of objects in common use, and even jewels of mere fancy, such as we should term curiosities (Fig. 85). Our quotations shall be concluded by a reference to pieces of both these sorts, to show that the French goldsmiths of that period were capable of undertaking every variety of work:—

"Un myroer d'or, et autour la brodeure sont les douze signes esmaillés sur rouge cler, et au doz est l'ymage de notre-dame saincte Katherine et autres." ¶

"Ung escriptoire d'or à façon d' une gayne à barbier, et est hachée par dehors aux armes d' Estampes, et a dedens une penne a escripre, ung greff, ung compas, unes cizailles, ung coutel, unes furgettes tout d' or, et pendent avec ung cornet à enque d' or, à ung laz d' or.**

"Un petit coutelet à façon de furgete à furger dens et à curer oreilles.††

* *Inventaire de Charles* V., fol. 29.

† "Une crapaudine assize en un annel d'or" (Inventory of the Duke de Berry) "Deux crapaudines, l'une en ung anneau d'or, l'autre en ung anneau d'argent." (Inventory of the Duke of Burgundy.)

‡ *Inventaire de Charles* V., fol. 229.

§ Ibid. fol. 235.

‖ Ibid. fol. 251.

¶ Ibid. fol. 76.

** Ibid. fol. 246.

†† Ibid. fol. 247.

"Ung homme chevauchant ung coq tient ung myroer en façon de treffle.*

"Ung joyau en manière d' ung dragon à une teste de femme enchappellée.†

"Ung homme qui est nulz piez et chevauche ung serpent qui a deux testes et joue d' un cor sarrazinois.‡

"Ung chamel sur une terrasse garnye de perles, balaiz et saphirez, et a le chamel la boce d' une coquille de perle.§

"Ung cerf de perles qui a les cornes d' esmail ynde (blue) et une sonnette au col." ‖

The names of mediæval artists have, in our day, become the subject of careful inquiry. We cannot better terminate this long enumeration of the works of the goldsmith in France in the XIVth century, than by giving the names of those who are mentioned in the inventories of the time, as having executed the finest of the pieces therein described; these must certainly have been the first masters of their day. They are:—Jean de Mautreux, goldsmith to King John; Claux de Fribourg, who made a gold statuette of St. John for the Duke of Normandy; and a superb cross for the same prince when he became king; Jean de Piguigny maker of the Duke of Normandy's diadem, Robert Retour, goldsmith at the Conciergerie of St. Paul; Hannequin, charged with the making of the three new crowns of Charles V.; and Henry, goldsmith to the Duke of Anjou.

Goldsmith's work of the XVth century.

The Gothic style which pervaded the metal-work of the XIVth century, continued during the whole of the XVth, in France as well as in Germany, with only such modifications as would naturally result from successive changes in the style of ogival architecture, and the gradual improvement which was taking place in all the arts of design. For example, the magnificent shrine of the abbey of Saint-Germain des Prés, which was executed by order of Abbot William, in 1408, by three celebrated goldsmiths of Paris, Jean de Clichi, Gautier Dufour, and Guillaume Boey, represented a church in the gothic style of that period. This superb piece of metal-work has been

* *Inventaire de Charles* V., fol. 269. † Ibid. fol. 170.
‡ Ibid. fol. 172. § Ibid. fol. 238. ‖ Ibid. fol. 255.

destroyed, but we may judge of its beauty from the engraving given by Don Bouillard in his "Histoire de l'Abbaye de Saint-Germain des Prés," and of its richness by the description added by the learned Benedictine. Twenty-six marks of gold, two hundred and fifty marks of silver (exclusive of the coffer containing the relics) two hundred and sixty precious stones, and one hundred and eighty-seven pearls entered into the composition of this monument.*

Nearly all the churches of Germany were despoiled of their specimens of the goldsmith's art at the period of the wars produced by the Reformation. Yet there still exist in the treasuries of some cathedrals, as well as in the museums, many pieces that show that the Gothic style was invariably adopted by the goldsmiths until the first year of the XVIth century. Thus, in the treasury of the Cathedral of Ratisbon, we see a silver statuette of St. Sebastian, which appears to belong to the XVth century, and bears, like those described in the inventory of Charles V., relics suspended to a chain. In the Chamber of Arts at Berlin, there are several pieces of ecclesiastical metal-work of the end of the XVth century, especially a statuette of the Virgin executed by Henry Hufnagel, a goldsmith of Augsburg, in 1482. These pieces bear the impress of the Gothic style.

It was only towards the end of the first quarter of the XVIth century that the French and German goldsmiths adopted the Italian style, which will next occupy our attention.

Italian Goldsmith's work of the XIIIth, XIVth and XVth centuries.

The political division of Italy into a number of petty sovereignties, and the liberty enjoyed by many of the great towns, were eminently favourable to the development of the art of luxury. The princes, the great dignitaries of the Church, the rich and noble merchants of Florence, Venice, and Genoa, the opulent towns, all vied with each other in magnificence. The armour of the captains, the plate of the princes and nobles, the jewels of the ladies, the sacred vessels, and the decorations of the altars, all furnished incessant occupation for the goldsmiths; so that, notwithstanding the intestine and foreign wars which

* *Hist. de l'Abbaye de Saint-Germain des Prés*, Paris, 1704.

lmost constantly desolated Italy until towards the middle of he XVIth century, the art was held in higher esteem in that ountry than in any other of Europe.

At the end of the XIIIth century, when Nicholas, John of 'isa, and Giotto, east off the Byzantine yoke, and raised the rts from their previous state of languor and lethargy; the goldmith's art would no longer have been esteemed in Italy, had t not kept pace with the progress of sculpture, of which it vas the offspring; and accordingly goldsmiths were seen ollowing the lessons of the Pisan artists and ranking themelves among their pupils. From this period the goldmith's art made rapid progress in Italy. The goldsmiths ncreased in number; and when we know that the great Donatello, Filippo Brunelleschi, the bold artist of the cupola f the Cathedral of Florence; Ghiberti, who executed the vonderful gates of the Baptistery of St. John; all had goldsmiths as their first masters, and themselves practised he goldsmith's art, we may form some idea of what artists hese Italian goldsmiths were of the XIVth, XVth, and XVIth centuries, and what admirable works they must have roduced. But, alas! these noble works have almost all erished; their artistic worth proving no safeguard against upidity, or necessity, the fear of pillage,* or the love of hange. But a very few names even of these skilful rtists have descended to us; and in making known those reserved to us in the writings of Vasari, Benvenuto Cellini, nd others, we can rarely point out any of their works as eing still in existence.

In treating of enamels, we have said already that John of 'isa, in 1286, had enriched with bas-reliefs of enamelled ilver the high altar of the Cathedral of Arezzo, where we see he Virgin, between St. Gregory and St. Donato, sculptured n marble. This great master did not rest satisfied with aying a tribute to the taste of his age by these pieces of the

* Cellini tells us in his Memoir (*Vita di B. Cellini*, Firenze, 1830, p. 84) that, hile Pope Clement VII. was besieged in the Castle of St. Angelo, he received orders unset all the precious stones that were upon the tiaras, the sacred vessels, and e jewels of the sovereign pontiff, and to melt down the gold, of which he obtained vo hundred pounds. How many artistic treasures must have perished in the rucible of Cellini!

goldsmith's art; he even made a jewel, with which he adorned the breast of the Virgin. This jewel, in which were set precious stones of great value, cost the people of Arezzo, according to Vasari, 30,000 florins of gold. It was stolen by some soldiers; and the bas-reliefs of silver have alike disappeared.*

The brothers Agostino and Agnolo, and Andrew of Pisa († 1345), all belonging to the school of John, reckoned many goldsmiths among their pupils, and Andrew in particular rendered great services to the goldsmith's art by bringing to perfection the technical processes of casting and chasing. Thus, the early part of the XIVth century was one of those brilliant periods of Italian metal-work.

In 1316, Andrea d'Ognabene, a goldsmith of Pistoia, supplied, for the cathedral of that city, a magnificent altar-front, which was only the prelude to more important works, of which we shall speak hereafter. This piece of metal-work is decorated with six figures of prophets or apostles, expressed by a fine niello chasing, on an enamel ground, and with fifteen bas-reliefs, of which the subjects are taken from the New Testament. A Latin inscription transmits to us the name of the artist and the date of its execution.

Shortly after this we find mention made of Pietro and Paolo, who surpassed all their contemporaries in the beauty of their chasing; they were goldsmiths of Arezzo, and pupils of Agostino and Agnolo. In our chapter on enamels we have spoken already of the silver head, of natural size, so wonderfully chased and enriched with enamels, which they made to enclose the skull of St. Donato.

A goldsmith of Sienna, Ugolino, who had doubtlessly studied under his illustrious countrymen, Agostino and Agnolo, had acquired great celebrity by the magnificent silver reliquary of the Church of Orvieto, (Fig. 86). This reliquary, weighing 600 lbs., represents, with tolerable accuracy, the front of that church; it is enriched with enamels and detached figures. An inscription, engraved on this fine piece of metal-work, states its having been executed by Ugolino and his pupils, in 1338, under the pontificate of

* Vasari, *Life of John of Pisa.*

Benedict XII.* Unfortunately it is almost impossible to get a sight of this fine monument;† but some idea may be

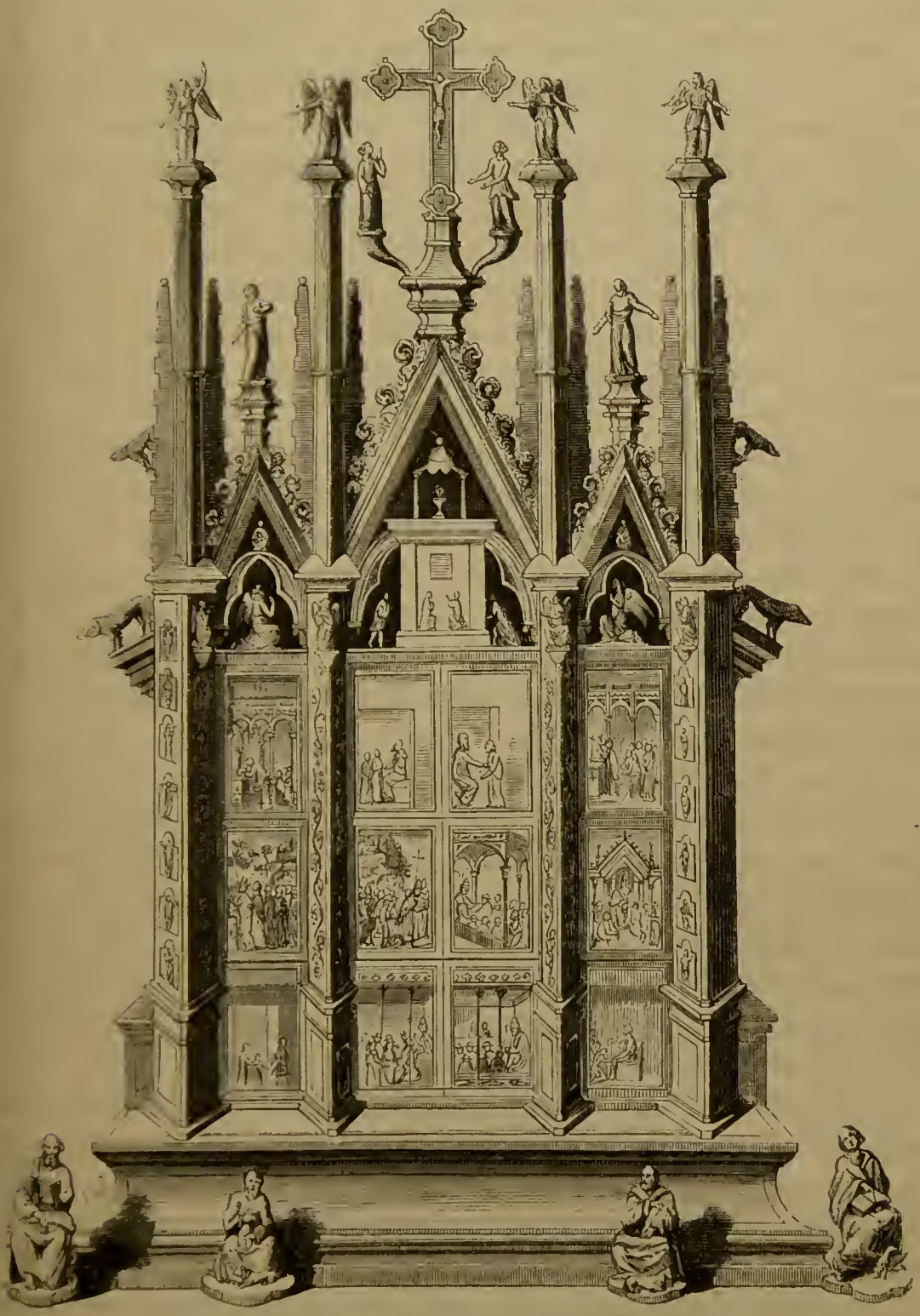


Fig. 86. Reliquary of Orvieto, Italian. XIVth century.

* Andrea Pennazi, *Istoria dell' ostia*, &c. . . . Montefiascone, 1731. Il Padre Della Valle, *Istoria del duomo d'Orvieto*, Roma, 1791. According to these two authors, the inscription runs thus: "† Per magistrum Ugolinum et socios, aurifices de Senis, factum fuit sub anno Domini MCCCXXXVIII, tempore Domini Benedicti Papæ."

† See above, p. 163.

formed of the skilful arrangement of the whole, and the science displayed in the pictures of enamelled chasing, by means of the engraving published by D'Agincourt.*

Maestro Cione was also a celebrated goldsmith of the first half of the XIVth century. Vasari cites among his finest works, and as being something marvellous, a bas-relief the subject of which is taken from the life of St. John the Baptist, with which he had ornamented the altar of that saint in the Baptistery of Florence. This altar of silver was begun in the XIIIth century, but was destroyed in 1366, to substitute for it the one that still exists. The beauty of Cione's bas-reliefs saved them from being melted, and procured them a place in the new altar upon which they may still be seen. His death occurred shortly after, in 1330, and the high repute in which he was held is proved by the number of pupils, all artists of merit, that he left behind him. Among these are Forzone d'Arezzo, whose fine translucid enamels upon relief have been already mentioned, and Leonardo of Florence, son of Giovanni, who showed himself a more skilful draughtsman than his rivals, and became the first goldsmith of that city.

At the time in which Leonardo flourished, were commenced the two most considerable monuments of the goldsmith's art that have been handed down to us; the altar of St. James of Pistoia, of which we have already noticed the facing, and the altar of the Baptistery of St. John, at Florence. For more than a hundred and fifty years the most skilful goldsmiths of Italy were engaged on these two monuments, upon which we may follow the history of the goldsmith's art in Italy during the XIVth and XVth centuries. Leonardo enriched them both with his workmanship. Let us say a few words concerning the altar at Pistoia, deferring a description of that of St. John till we speak of the metal-work of Antonio del Pollaiuolo.

The altar of Pistoia is composed of an immense number of bas-reliefs, statuettes, and figures in high-relief, disposed on several planes. It would be too long to give here a detailed

* *Hist de l'art peinture*, t. vi. pl. cxxiii. A figure of this reliquary is also to be seen in the work entitled: *Stampe del duomo di Orvieto*, Roma, MDCCXCI.

description of this monument; it suffices, in order to give an idea of its importance, that we describe its general character and the most remarkable pieces of metal-work it contains.

On the right side of the altar are nine bas-reliefs, the subjects of which are taken from the life of St. James. A Latin inscription, engraved underneath, states them to have been made by Leonardo, in 1371. The bas-reliefs on the left side, which nearly all of them represent scenes from the Old Testament, are by the hand of the same artist. The shrine, containing the body of St. Atto, is not one of the least precious ornaments of the altar; among other bas-reliefs on it is to be observed, an Annunciation, placed between little columns; it is an admirable work, and was executed in 1390 by Pietro, son of Arrigo Tedesco, to whom we also are indebted for nine half-length figures in a good style. Upon the same line are two prophets, by Brunelleschi, probably the only specimens in metal-work remaining of this great artist. The statue of St. James in silver gilt, executed by Giglio or Cillio of Pisa, in 1350, occupies the upper plane; the angels which accompany it and the tabernacle, are by Pietro Tedesco, who also executed twenty-four statuettes, distributed upon two planes, on the right and left of the statue of St. James. A great number of other statuettes embellished the different parts of this immense monument. The principal are by Nofri, son of Buto (1396), Atto Braccini of Pistoia (1398), Nicolò, son of Guglielmo (1400), Leonardo, son of Matteo (1400), Pietro, son of Giovanni of Pistoia (1400), and Pietro, son of Antonio of Pisa (1456). Other goldsmiths are named among those who, at different periods, laboured at this work, Lorenzo del Nero, of Florence, Lodovico Buoni, of Faenza, Meo Ricciardi, Cipriano, and Filippo. The weight of the altar is estimated at 447 lbs.

We will finish all that relates to the altar of Pistoia, by calling attention to the fact, that among the artists engaged in its execution was a German, Pietro, son of Arrigo. The Germans had maintained their pre-eminence in the goldsmith's art, for Ghiberti, in his Memoirs, makes mention of a celebrated artist of Cologne, who had made various wonderful pieces of metal-work for the Duke of Anjou, brother of St. Louis, to whose service he was attached. This goldsmith-artist, whose

name is not given by Ghiberti, died in Italy under the pontificate of Martin IV. († 1285). Cicognara also, though often partial from a spirit of nationality, acknowledges that these German artists, who worked in Italy in the XIIIth and XIVth centuries, did not go there to study their art, but rather to practise it.*

There are still two pieces of metal-work of the same period as that which the silver altars of Pistoia and Florence were commenced; these are enclosed in the large tabernacle (ciborium) of the high altar of St. John Lateran, at Rome, but are not more accessible than the reliquary of Orvieto; they are busts of St. Peter and St. Paul of gold and silver, serving as reliquaries for the heads of these two apostles. D'Agincourt extols highly the elegance and finish of these rich reliquaries, and also of their pedestals, which are decorated with chased bas-reliefs. They were made in 1369, for Urban V., by the goldsmiths Giovanni Bartholi of Sienna, and Giovanni Marci. To judge of these two busts by D'Agincourt's engraving,† they are far from being equal, as objects of art, to the greater part of the bas-reliefs and statuettes of the silver altar of Pistoia. Charles V. contributed to the embellishment of these reliquaries, by the gift of two fleurs-de-lis, enriched with precious stones, which ornament the breast of each bust; the French goldsmith's work being deemed worthy of a place by the side of these fine Italian chasings.

At the end of the XIVth century, two great artists issued from the workshop of a goldsmith; Filippo Brunelleschi (1377 † 1446) and Luca della Robbia.

Brunelleschi, having early shown an aptitude for all works of skill, his father placed him under a goldsmith. The young Filippo soon excelled all his companions in the mounting of precious stones, and acquired great skilfulness in sculptured metal-work; it was at this time that he executed the two prophets in silver that form part of the altar of Pistoia;‡ they are works of great beauty. Brunelleschi, feeling his genius impelled him to higher enterprises, soon gave up the gold-

* Cicognara, *Storia della sculpt.*, t. i. p. 368.
† *Hist. de l'art sculpt.*, t. ii. p. 67, pl. xxxvii.
‡ Vasari, *Life of Brunelleschi.*

smith's art; he became the rival of Donatello in sculpture, and far surpassed that great artist in architecture. The cupola of Santa Maria del Fiore, his highest title to fame, has induced forgetfulness of his other works, which would nevertheless have sufficed to secure him the pre-eminence among the first goldsmiths of his age.

Luca della Robbia († 1430) entered early into the workshop of the goldsmith Leonardo, and learned, under the direction of that excellent master, to draw and model in wax,* but his rising talents soon led him to devote himself solely to sculpture, and nothing is known of his youthful performances in the goldsmith's art.

To complete the history of Italian metal-work of the XIVth century, we have yet to mention five celebrated goldsmiths, contemporaries of Brunelleschi and of Luca della Robbia: Antellotto Baccioforte and Mazzano, both of Piacenza; Nicolò Bonaventura and his nephew Enrico, and the Florentine Arditi.

We have already named Antellotto as having restored and partly remodelled the jewels of the treasury of Monza.

Mazzano's character was established by a magnificent crozier of silver gilt, more than four feet high, which existed until 1798 in the Cathedral of Piacenza. It was enriched with bas-reliefs, statuettes, ornaments and enamels designed with taste, and finished with exquisite delicacy. This beautiful work, begun in 1388, was not completed till 1416, after twenty-eight years of labour. A few years ago, some fragments of it were remaining in the collection of M. Boselli,† upon a reliquary belonging to the Cathedral of Forlì, which contains the head of St. Sigismund. The fine chasings, the nielli, and the enamels with which this reliquary is enriched, render it one of the finest specimens of the goldsmith's art in the XIVth century.‡

Andrea Arditi is celebrated by a bust in silver, of nearly natural size, serving as a reliquary to the head of San Zanobi,§ which is seen through a crystal placed on the top of the head,

* Vasari, *Life of Luca della Robbia.*
† Cicognara, *Storia della sculpt.*, t. ii. p. 187.
‡ Ibid. t. i. p. 369.
§ Or St. Zenobius, Bishop of Florence.

the metal being cut away for that purpose. This bust is enclosed in a magnificent shrine of bronze, a master-piece of Ghiberti's, preserved in the Church of Santa Maria del Fiore, Florence. It is only exhibited once a year, the 26th of January, unless it be to avert some great calamity, but it is not impossible to obtain a sight of the reliquary on other days. The sculpture of Arditi is at once noble and simple; he may, however, be accused of stiffness, a fault often met with in works of that period. The execution is very careful: the bust is enriched by medallions finely engraved, upon which are represented some of the saints. Vasari, who passes a high eulogium upon this piece of sculptured metal-work, attributes the making of it to Cione,* but this inscription, engraved upon the bust in Gothic characters, "Andreas Arditi de Florentia me fecit," is sufficient to decide the question. Fig. 88, is a chalice by the skilful hand of Arditi; it has the same Latin inscription, enamelled underneath the

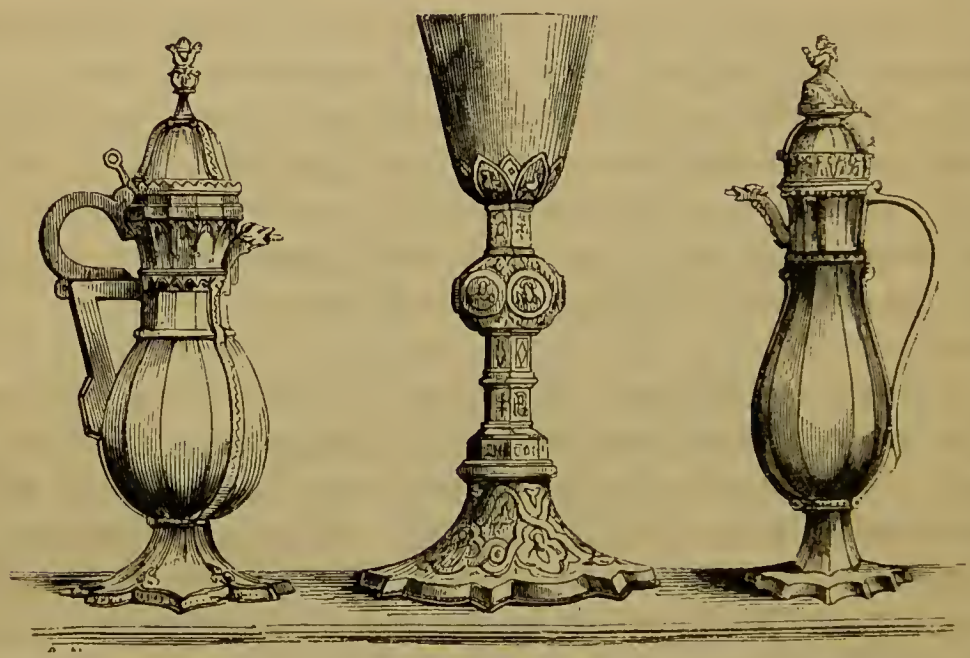


Fig. 87. Cruet. Rock-crystal, French, XIVth century.

Fig. 88. Chalice, silver gilt, by Arditi. XIVth century.

(All in the collection of Prince Soltykoff.)

Fig. 89. Cruet. Rock-crystal. French, XIVth century.

knop. The XVth century will introduce to our notice still more distinguished artists.

Lorenzo Ghiberti, son-in-law to Bartoluccio, received from

* Vasari, *Lives of Agostino and Agnolo.*

that skilful artist the first principles of the arts of design. When scarcely twenty years of age he had just left the workshop of his father-in-law to go to Rimini, when he was recalled to Florence by the latter to offer himself to the guild of merchants in that city, as a candidate (1401) for the execution of the two doors for the Baptistery of St. John. Ghiberti had to contend with powerful rivals; among whom, Brunelleschi, Donatello, and Jacopo della Quercia were the most esteemed. But, directed by Bartoluccio, who even assisted him, according to Vasari, in the execution of his piece for competition, Ghiberti produced so fine a work that Brunelleschi and Donatello acknowledged themselves vanquished. The judges ratified the disinterested decision of those great artists, and Ghiberti was charged with the execution of these gates, by which his name has been immortalised. The bas-relief of Ghiberti, still preserved in the cabinet of bronzes of the Florence Gallery, was admirable in design and composition; yet, in these respects, that of Brunelleschi, to be seen in the same cabinet, was in no degree inferior. Ghiberti owed his victory to the exquisite and finished execution of his bronze, which had been completed and retouched with all the care which good goldsmiths then bestowed upon the most delicate specimens of their art; and it may be safely asserted that it was to his talent as a goldsmith that he owed his triumph in this competition with the greatest sculptors of the XVth century.

The brilliant success of Ghiberti obtained him numerous orders for sculpture; yet he never renounced his original profession, but continued during his whole life to execute works connected with the goldsmith's art. Besides the silver bas-reliefs for the altar of the Baptistery of St. John, which are splendid pieces of sculpture, he even worked at jewellery. Thus, in the year 1428, he mounted as a seal, for Giovanni, son of Cosmo de' Medici, a cornelian of the size of a walnut, engraved in intaglio, which, it was said, had once belonged to the Emperor Nero. The handle, of chased gold, was in the form of a winged dragon issuing from a cluster of ivy leaves. Vasari extols the finish and beauty of this work.

Shortly afterwards, Pope Martin V. († 1431), being in Florence, commanded Ghiberti to make him two precious

jewels: a button, or fastening for his cope, and a mitre of gold. He executed, in relief, upon the button, a half-length figure of Christ in the attitude of benediction, surrounded with stones of great value; the mitre was covered with a rich foliage in gold, wonderfully chased, from which issued eight figures in full relief, of exquisite beauty.

In 1439, Pope Eugenius IV. employed Ghiberti to make for him, during his stay at Florence, a mitre of gold, weighing fifteen pounds, adorned with precious stones of great value, the weight of which was five ounces and a half. Lorenzo set all these jewels in ornaments enriched with a variety of graceful little figures of children and others in full relief. On the front of the mitre was Christ seated on his throne and surrounded by a host of little angels; on the back part was the Virgin, on a seat supported by angels, and accompanied by the four Evangelists. From what remains of the works of Ghiberti, we can form an idea of the elegant style and extreme delicacy of these precious jewels;* and if he is justly considered as one of the greatest sculptors of modern times, he may also be classed among the first of goldsmiths.

The execution of the doors of the Baptistery of St. John occupied forty years to complete, and during these long labours Ghiberti took, as his assistants, young goldsmiths, who became, at a later period, skilful masters of the art; among these were Masolino da Panicale, Nicolò Lamberti, Parri Spinelli, Antonio Filarete, Paolo Ucello, and Antonio del Pollaiuolo, the most celebrated of all.†

It was in the workshop of the goldsmith Bartoluccio Ghiberti that Pollaiuolo (born about 1424 † 1498) acquired the rudiments of drawing and of the goldsmith's art. He made such rapid progress that he soon equalled his master, and acquired a reputation for skill which enabled him to work on his own account. He accordingly took leave of Bartoluccio and Lorenzo to open a shop in Florence, where, for many

* These details relating to the jewels of Ghiberti are given to us, not only by Vasari, but also in the curious memoirs left by Ghiberti himself. These memoirs, which may be considered as the earliest attempt at a history of art in Italy, long remained unknown; they have now been published by Cicognara in his work, *Storia della scultura*, t. ii. p. 99, and by M. Léopold Leclanché, in his translation of Vasari, t. ii. p. 88.

† Vasari, *Life of Ghiberti.*

years, he followed the profession of goldsmith with great success; his nielli especially were in high repute. The consuls of the Guild of the Merchants then employed him to execute some bas-reliefs for the silver altar of the Baptistery of St. John,* of which it is now time to speak.

From the XIIIth century the Florentines had resolved to re-cover entirely all the faces of the high altar of the Baptistery with plates of silver, in which the life of the Baptist should be sculptured in relief. This altar, at which Cione had worked, was not considered handsome enough in the following century; the greater part of it was therefore melted down, and the consuls of the Guild of Merchants decided that another should be erected much richer and of a more magnificent design.† The new altar was begun in 1366, as appears from the inscription engraved on it. It was only completed in 1477, if indeed it can be said to be so now, since two bas-reliefs are yet wanting on the left side of the altar, their place being supplied by paintings.

This magnificent piece of metal-work is only exposed to public view at the Feast of St. John and the following day; during the course of the year it is preserved in the cathedral, where it may be seen through a little interest; but as it is forbidden to draw and take measurements, the whole must be carried in the eye.

This monument, which is about 4 feet 3 inches high, is divided into three parts; the principal front, is about $10\frac{1}{2}$ feet long and the two sides, each about $3\frac{1}{4}$ feet. The statue of St. John placed in a Gothic niche, occupies the centre of the principal front. It is a fine piece of workmanship, of silver gilt, about 26 inches high, and was executed by Michelozzo in 1452. Vasari has attributed this statuette to Antonio del Pollaiuolo, but the book of the Guild of Merchants furnishes proof that it is by the hand of Michelozzo. On each side of the statue are four bas-reliefs in two tiers. The sides also contain four bas-reliefs, each arranged in like manner, making altogether sixteen bas-reliefs, two of which, as already observed, are represented by paintings. These silver pictures are executed in very high relief, and may be

* Vasari, *Life of Ant. and Pietro del Pollaiuolo.*
† Gori, *Thesaurus vet. diptych.* Florentiæ, 1759, t. iii.

about 12 inches high by 8 inches; the subjects are all taken from the life of St. John. The frieze, which occupies the upper part of the monument, is decorated with forty-three niches, containing each a small figure of silver, from $4\frac{3}{4}$ to 6 inches high. The smooth parts of the monument are enriched with decorations, of which the detailed description would carry us beyond our limits. These consist of Gothic windows, of little niches containing figures, of stars and other ornaments executed either in translucid enamel upon relief, or in nielli upon a blue enamelled ground.

Berto Gori, Cristoforo, son of Paolo, Leonardo, son of Giovanni, and Michel Monte, are the three earliest labourers in this great composition, to say nothing of Cione, whose works, as before stated, belonged to the original altar.

The large bas-reliefs are by Cione, Lorenzo Ghiberti, Bartolommeo Cenni, Andrea del Verocchio, Antonio Salvi, Francesco, son of Giovanni, and Antonio del Pollaiuolo. Gori, however, does not mention Ghiberti, but the archives preserved of the making of the dome, as well as current traditions, appear to leave no doubt that several of these fine bas-reliefs are the work of that great sculptor. It may readily be conceived, that coming from the hands of so many artists who flourished at different periods, these bas-reliefs must present marked varieties in style and execution.

Among the pieces of metal-work which may be regarded as accessories to the altar, the most remarkable is a large cross of silver, above eight feet high, or rather a group of several figures in full relief, representing the Crucifixion. Milano, son of Dei, Becto, son of Francesco, and Antonio del Pollaiuolo are the artists of this fine work, which was finished in 1456. Gori ascribes the upper part of this monument to Becto, the lower to two other artists. Antonio del Pollaiuolo also made magnificent candlesticks to accompany the cross; * which unfortunately, were melted in 1527, with other fine works in silver, to defray the expenses of the war.†

We have seen in the treatise of Theophilus, that the art of working in niello, which consists in covering with a kind of black enamel the fine incisures of an engraving executed upon

* Vasari, *Life of Ant. and Pietro del Pollaiuolo.* † Gori, *op. cit.*

silver, had become, from the XIIth century, an accessory to the goldsmith's art; and accordingly we must rank among the goldsmiths Maso Finiguerra, who, towards the middle of the XVth century, enjoyed at Florence a well-deserved reputation for his nielli upon silver. No one ever was known to engrave so many figures in so small a space, and with such perfect correctness of drawing.* Among the nielli of silver preserved in the Cabinet of Bronzes of the Florentine Gallery, may be seen a pax executed by Finiguerra, in 1452, for the Baptistery of St. John; this is further curious as being the plate of the first engraving ever printed, and of which the Imperial Library of Paris possesses the only impression.† Thus, the fame acquired by Finiguerra as a skilful goldsmith, was justly eclipsed by the glory of having been the inventor of taking impressions from an engraving upon metal, (Fig. 90).

Among the artists of the end of the XVth century who, after having been goldsmiths, became celebrated in painting or in sculpture, must be cited Andrea Verocchio († 1488), Domenico Ghirlandajo († 1495), and Francesco Francia (1450 † 1517). Verrocchio, who deserves an equal reputation as a sculptor, and whose master-piece, the equestrian statue of Bartolommeo Colleoni, still stands in the Piazza of St. John and St. Paul at Venice, had begun life as a goldsmith at Florence: several cope buttons, a vase covered with animals and foliage, and a fine cup ornamented with a dance of children, had brought him into notice, ‡ whereupon the Company of Merchants ordered of him, for the altar of the Baptistery, two bas-reliefs of silver, which increased his reputation. Called to Rome by Sixtus IV., to restore, in the

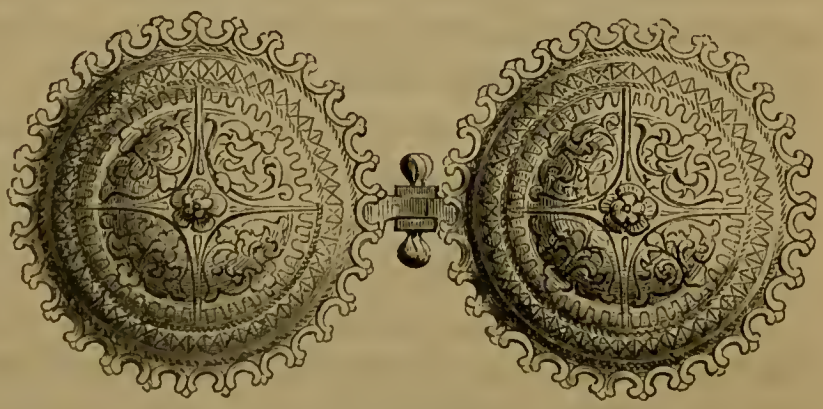


Fig. 90. Italian fibula or clasp. Silver, with niello work. XVth century. Marlborough House.

* Vasari, *op. cit.* † Du Chesne aîné, *Essai sur les nielles*, Paris, 1836.
‡ Vasari, *Life of Andrea Verocchio.*

pontifical chapel, the silver statuettes of the Apostles, which had been destroyed, he acquitted himself successfully of his task, but his studies of the antique in the capital of the Christian world, determined him to devote himself thenceforth exclusively to sculpture and painting. He had the glory of reckoning among his pupils Perugino and Leonardo da Vinci.

Domenico Ghirlandajo was son of Tommaso, a celebrated goldsmith, who had received the name of Ghirlandajo from an ornament in the form of a garland which had been invented by him, and of which the young Florentine women were passionately fond. It was naturally intended that Domenico should follow the profession of his father. His works, which consisted principally of silver lamps of great value, were destroyed, together with the chapel of the Annunziata at Florence which they decorated, during the siege of the city in 1529.* Domenico Ghirlandajo relinquished the goldsmith's art to devote himself to painting, in which he became illustrious.

We have spoken already of Francia's enamels upon chasings in relief; but that which earned him so high a reputation, was his skill in cutting dies for medals and for the coinage,† then considered as branches of the goldsmith's art. To these pursuits Francia had expressly devoted himself, and until he had attained to manhood, had not even touched a pencil. It was therefore by a sort of miracle, for which there had been hitherto no precedent, that the labours of a few years sufficed to place him among the first masters of his time.

To close the list of the celebrated goldsmiths of the end of the XVth century and of the first year of the XVIth, we must name Ambrogio Foppa of Milan, surnamed Caradosso, and Michelagnolo di Viviano.

Caradosso was a skilful goldsmith in every department of the art, but he principally distinguished himself by his enamels upon relief, and by the medals he engraved under the pontificates of Julius II. and Leo. X.‡ He also excelled in making little medallions in gold, enriched with figures either in full or in high relief, that were worn in the caps

* Vasari, *Life of Domenico Ghirlandajo.* † Ibid. *Life of Francesco Francia.*
‡ Vasari, *Life of Bramante.*

and in the hair. According to Cellini,* he was still living under Clement VII.

The taste for jewels enriched with little figures either detached or executed in high relief, and covered with enamels, was predominant in Italy in the XVth century. There are still several specimens remaining of that period. We may point out among the finest a pax, preserved at Arezzo, in the treasury of the Madonna. This pax was given in 1464 by Pope Pius II. to the Siennese, his fellow-citizens, who afterwards made a present of it to the people of Arezzo.

Michelagnolo was one of the most esteemed goldsmiths of Florence, in the times of Lorenzo and Giuliano de' Medici. He was much in repute for the mounting of precious stones, and executed with equal perfection nielli, enamels, and works of chasing.† Vasari cites, as works of great beauty, his decoration of the armour worn by Giuliano de' Medici in a carrousel which took place upon the Piazza Santa Croce.‡ The best proof of the merit of Michelagnolo, is the eulogium passed upon him by Benvenuto Cellini, of whom he was the earliest instructor. §

Italian goldsmith's work of the XVIth century. B. Cellini.

Benvenuto Cellini was born in 1500. After spending nearly two years in the workshop of Michelagnolo, to whom he had been apprenticed at the age of thirteen, he was placed under Antonio di Sandro, another Florentine goldsmith, and artist of great talent. He subsequently worked under different goldsmiths of Florence, Pisa, Bologna, and Sienna, to which latter place he had been banished in consequence of an affray. All the time he could steal from the goldsmith's work, he devoted to drawing and the study of the works of the great masters, particularly those of Michel Angelo, of whom he was a passionate admirer.‖ At Pisa, he often visited the Campo-Santo, and zealously copied the antiquities it contains.¶ At the age of nineteen he went to Rome. During the two years

* Benvenuto Cellini, *Tratt. dell' oreficeria.* Milano, 1811, p. 55.
† Ibid. *Tratt. dell' oreficeria,* proemio, lvii.
‡ Vasari, *Life of Baccio Bandinelli.*
§ *Vita di Benvenuto Cellini scritta da lui medesimo,* Firenze, 1830, p. 12.
‖ "Attesi continuamente in Firenze a imperare sotto la bella maniera de Michel, nolo e da quella mai mi sono ispiccato." *Vita di B. Cellini,* p. 23.
¶ Ibid. p. 20.

he passed there, on this his first visit, he devoted himself almost exclusively to the study of antiquities, which he only relinquished to work at the goldsmith's art when he found himself in want of money.* It may easily be imagined that by following this course, Cellini, who was endowed with great intelligence and a lively imagination, soon became a distinguished artist.

In 1523, a new quarrel with his neighbours having forced him to fly from Florence, he retired to Rome, where he resided until 1537, with the exception of some months passed at different periods, in Florence, and the time he employed in visiting Mantua, Naples, Venice, and Ferrara. During these fourteen years he established his fame as a goldsmith, and made his most beautiful jewels, as well as the dies for the money of Rome, and the medals of Clement VII. and Duke Alexander. Cellini first went to France in 1537. He was presented to Francis I.; but this prince having left Paris for Lyons, Cellini decided upon returning to Rome.

He was thence summoned back again by Francis I. in 1540. During nearly five years which he spent at Paris, he executed for the king a large number of fine works, of which the only one remaining is a golden salt-cellar, preserved in the Cabinet of Antiquities at Vienna. Cellini, on his return to Florence, devoted himself to the higher walks of sculpture. It was at this time that he cast his bronze statue of Perseus, and the fine bust of Cosmo I., and he also sculptured in marble a crucifix of natural size, which Vasari considers as the finest thing of its kind ever executed. Yet he did not give up the goldsmith's art, and still made lovely jewels for the Duchess Eleonora. After having spent twenty-five years in the service of the Grand-Duke of Tuscany, as sculptor, goldsmith, and master of the mint; Cellini died in 1561, inadequately recompensed for his great works, but leaving behind him a high and well-deserved reputation.

There can be no doubt that Cellini was one of the most eminent of artists, and that during his long lifetime, he made a considerable quantity of pieces of goldsmith's work. We therefore are at a loss to understand a judgment recently

* *Vita di B. Cellini*, p. 26.

pronounced upon this great artist by M. Dussieux, in his Recherches Archéologiques sur l'histoire de l'orfévrerie, "Cet homme fit bien quelques ouvrages d'orfévrerie, mais il eut beaucoup trop d'audace, se vanta avec une impudence incomparable, et c'est autant par ces moyens que par son grand talent, qu'il s'est acquis une reputation colossale. Il est devenu un mythe."*

Thus Cellini should be regarded as a sort of fabulous being, and the greater number of his fine works in metal as the creatures of his imagination!

In the writings of Cellini upon which M. Dussieux no doubt relies for sustaining this charge of impudence and boasting, we ought to distinguish between the man and the artist. The man is a boaster, it is true; he is a bully of boundless audacity even in the company of princes, and one who does not shrink from murder to revenge himself upon an enemy. According to his own assertion, it was he who, in defending the walls of Rome, killed the Constable Bourbon with the shot of an arquebus, and who afterwards commanded the artillery of the Castle of St. Angelo in which Clement VII. was besieged. Admitting that in these recitals there may be great exaggeration, yet still, when the artist is describing some of his works, although he writes as a man who appreciates his own talent, we find nothing which savours of boasting. It is often, as he says himself,† in order to teach by examples that he enters into minute details of the works executed by himself. Besides, he knows how to do justice to the talent of the goldsmiths of his time, whom he often places above himself, and sometimes leaves to his workmen the credit of having invented certain processes of which he made use.‡

Had we only his autobiography by which to judge of Cellini, we might to a certain extent understand the opinion entertained of him by M. Dussieux; but works of his still exist to attest the veracity of his memoirs in all that relates to art, and Vasari, his contemporary, who had seen his masterpieces in metal-work, has borne witness to the wonderful

* *Annales archéologiques*, t. iii. p. 261.

† "Seguitando adunque il nostro costume solito, che è di dimostrar le cose per via d' esempj dico . . ." *Tratt. dell' oreficeria*, cap. vii. p. 92. ‡ Ibid. p. 117

fertility of his genius, and the high estimation in which his productions were held.

Let us hear the Italian biographer:—"Cellini, a citizen of Florence, now a sculptor, had no equal in the goldsmith's art, when he followed it in his youth, and was perhaps many years without having any, as well as in the execution of little detached figures or in bas-reliefs, and all the works of this profession. He mounted precious stones so beautifully, and decorated them with such wonderful settings, such exquisite little figures, and sometimes of so original and of so fanciful a taste, that nothing can be imagined superior to them. Nor can we sufficiently praise the medals of gold and silver engraved by him, in his youth, with incredible care. He made at Rome, for Pope Clement VII., a cope button of admirable workmanship, in which he represented the Eternal Father. In it he set a diamond, cut into a point, surrounded by little children, chased in gold with extraordinary talent. Clement VII. having ordered him to make a chalice of gold, the cup of which was to be supported by the theological virtues, Benvenuto conducted this astonishing work almost entirely to its completion. Of all the artists of his time who tried their abilities in engraving medals of the pope, no man succeeded better than he did, as all those know who possess any or have seen them; therefore all the dies of the money of the Romans were intrusted to him, and never were finer pieces struck. After the death of Clement VII., Benvenuto Cellini returned to Florence, where he engraved the head of Duke Alexander upon the dies of the money; the beauty of these is so great, that many impressions of them are now preserved like valuable ancient medals, and that not without reason, for Benvenuto here surpassed himself. Finally he devoted himself to sculpture and the art of casting statues. In France, while in the service of Francis I., he executed a number of works of bronze, silver, and gold. On his return to his own country, he worked for Duke Cosmo, who first ordered of him several pieces of metal-work, and afterwards some sculptures." *

What better answer can be given to M. Dussieux?

In support of the account of Vasari, have we not, as we

* Vasari, *Vita di B. Cellini.*

aid before, many works of Cellini to appeal to? To say nothing of the magnificent bronze bust of Cosmo I., or the group of Perseus and Medusa, we may quote the exquisite pedestal of this group, ornamented with statuettes of bronze, and the small model of the Perseus,* the dimensions of which bring them more within the vicinity of the higher works of the goldsmith, as sufficient to show what Cellini was capable of in works belonging to that art.

The pieces of goldsmith's work and the jewels made by his hands, of which the authenticity is indisputable, are, it is true, few in number; one can scarcely include in this list any beyond the beautiful saltcellar executed for Francis I., the money he made for Clement VII. and Paul III., the medal of Clement VII.,† and that of Francis I., and lastly, the mounting of a lapis-lazuli cup with three handles in enamelled gold enriched with diamonds, and the cover in enamelled gold, of another cup in rock-crystal, which are preserved in the Cabinet of Gems of the Florence Gallery, and had had from the XVIth century a place in the treasury of the Medici.

Since Cellini laboured as a goldsmith for more than fifty years, as he served Clement VII., Paul III., Francis I., and the Dukes of Florence in that capacity, it cannot be doubted that he made a large number of pieces of goldsmith's work and jewels; all cannot have perished, and assuredly many works of his, besides those just enumerated, must still be in existence.

After having carefully examined Cellini's works in sculpture, together with his authenticated pieces of goldsmith's work and jewels, in order to be thoroughly conversant with his style, and after having studied in his published treatise the artistic processes he employed, we may feel ourselves justified in pointing out several pieces, which, though not so well authenticated as those above mentioned, may yet, with some degree of certainty, be looked upon as specimens of his skill. The following are some we have seen.

In the plate-room of the Grand Duke of Tuscany, three

* This model in bronze is preserved in the Florence Gallery, by the side of another model in wax, also by Cellini.

† Eugène Piot has published an engraving of it, with the translation of the "Treatise on the Goldsmith's art" of Cellini, in the "Cabinet de l'amateur et de l'antiquaire," t. ii.

cups and a flask in enamelled gold, enriched with handles in the form of winged dragons with fantastic heads, which are

Fig. 91. Pendant jewel of the Renaissance, representing France and Victory, of enamelled gold, enriched with pearls and precious stones. Coll. Londesborough.

of exquisite design and wonderful execution. These pieces bear the arms of the Medici and the Farnese families.

In the Cabinet of Antiquities at Vienna, an oval medallion in enamelled gold, representing Leda half reclined, with Jupiter metamorphosed into a swan; Cupid standing, smiles upon the pair. These figures are in high relief, coloured in enamel,

and stand out almost entirely from the ground. The frame that surrounds this medallion is perforated in chased and enamelled gold, enriched with precious stones. This jewel passes for that spoken of by Cellini in his memoirs, as having been made for the Gonfalonier of Rome, Gabriello Cesarino.*

In the Riche Chapelle of the palace of the King of Bavaria at Munich, a small work, a kind of reliquary, in enamelled gold. In the centre is a group of little figures, in full relief, representing the Adoration of the Magi.

In the Museum of the Duke of Saxe-Gotha, the cover in enamelled gold of a little book of "Hours," of from 3 to $3\frac{3}{4}$ inches square; upon each of the panels is placed, chased in relief, a sacred subject placed under an arch; figures of saints occupy the angles; the whole is framed with borders, which, as well as the arches, are composed of diamonds and rubies. Three little bas-reliefs of most delicate execution, serve to decorate the back of this lovely cover. Might this be the one that Cellini made by order of Paul III., which was offered as a present to Charles V.? †

In the Cabinet of Medals of the Imperial Library at Paris, the mounting of an ancient cameo of oval form (No. 158) of the jewels. This mounting, chased and enamelled, is enriched with little figures in full relief, and with masks coloured in enamel; the figure of Victory is upon the top, she holds in chains two prisoners sitting beside her.

The fine jewel (Fig. 91), if not attributable to Cellini, is an exquisite specimen of the style of the Renaissance.

Cellini, following the example of Theophilus, has written a treatise upon the art he cultivated, in which he acquaints us with the processes commonly employed in his time, as well as with those introduced by himself. An analysis of this curious book would occupy too much time, but a brief summary of the matters it treats of, may suffice to give an idea of the various acquirements necessary in the XVIth century, to an artist desirous of pursuing the goldsmith's art in its many ramifications.

Chapter I. treats of jewellery, of the nature of precious stones, of their setting, and of the foils (*doublure*) used for

* *Vita di B. Cellini*, p. 18. † *Vita di B. Cellini*, p. 197.

coloured stones. Chapter II. explains the manner of composing the niello, and the processes employed in using it. The art of working filagree is described in the third chapter. Above we have given long extracts from Chapter IV., the subject of which is enamelling. Chapter V. teaches the art of jewellery, properly so called, "lavoro di minuteria," and that of embossing and chasing the sheets of gold and silver, "lavori di piastra," to form out of them the little figures which decorate the jewels, or the statuettes which enter into the composition of small pieces of gold-work. The minute details into which Cellini enters concerning the several branches of his art, included in the fifth chapter, plainly prove them to have been those in which he most delighted. He therein discusses the cope button executed for Clement VII., which was, as Vasari tells us, the admiration of all artists, and the beautiful golden salteellar made for Francis I., of which the two principal figures, Neptune and Bereeynthus, are from 8 to 10 inches high.

The works of "minuteria," or jewels properly so called, were also executed with the chisel; nothing was cast or stamped.* The "minuteria" work comprised rings, pendants (Fig. 92), bracelets; but the jewels most in fashion were certain medallions "medaglie di piastra d'oro sottilissimo," worn upon the hat, or in the hair. They were made in two ways: sometimes the little figures were hammered out upon a sheet of gold; sometimes these little figures, after having been hammered out so much, as almost to render them in full relief, were taken off the sheet of gold and laid upon (*appliqué*) a ground of lapis-lazuli, agate, or any other precious substance. These medallions were surrounded by a chased border, often enriched with enamels. Cellini enlarges with complacency on the making of this kind of jewel, and teaches in detail the various processes employed, both by Caradosso, who excelled in the art, and by himself. He also describes some of the finest specimens he had executed, particularly the jewel he made for the Gonfalonier Cesarino, now preserved in the Cabinet of Antiques at Vienna.

* "Tutto quello, che fra gli orefici si domanda lavorare di minuteria, si conduce col cesello." B. Cellini, *Tratt. dell' oreficeria*, p. 55.

This kind of jewel was much in fashion under Francis I. and Henry II., having doubtless been introduced into France by this celebrated artist; it received the name of *enseigne*.

Chapter VI. describes the manner of engraving in intaglio, gold, silver, and bronze, and the seals of princes and cardinals. The art of engraving coins and medals is developed in Chapters VII., VIII., IX., and X. Chapters XI. and XII. are dedicated to goldsmith's work, properly so called, "il lavorar di grosserie d'oro e di argento;" Cellini teaches here the different manners of melting the metal and of running it into sheets, and also the process of making gold and silver vases. The execution of silver statues, the size of life, and even of colossal proportions, forms the subject of Chapter XIII. The ten last chapters are employed in the explanation of certain processes relating to the material employed, such as those of the gilding of silver and the colouring of gold.

Fig. 92. Pendant Jewel for the Girdle, of gold, chased, pierced, and enamelled. Renaissance.

Cellini, like Theophilus, participated to a certain degree in the errors of his age; for example, he says that precious stones, like every other object in nature, produced under the influence of the moon, are composed of four elements.* Although the processes of fabrication are materially improved in

* B. Cellini, *Tratt. dell' oreficeria*, p. 2.

certain respects since the XVIth century, our goldsmiths may still derive useful information from Cellini's treatise. As regards the history of the art, it seems to make us acquainted with the style of the finest jewels of Cellini, and to resuscitate them, as it were, for our inspection, so clear and precise are his descriptions. One remark suggests itself, which is that upon many subjects the treatise of Cellini presents a striking analogy, and sometimes a perfect conformity, with that of Theophilus, written more than 350 years before. Thus the manner of executing repoussé work, and the process of casting handles for vases are very similar in these two treatises; and although the ingredients for composing niello are given in different proportions, the mode of applying it on the plate of engraved silver is identical. The artistic practices of the XIIth century had therefore been transmitted by tradition to the XVIth, almost without alteration. Is not this fact again to the credit of these middle ages, so much depreciated, so little known?

Taking leave of Cellini, we must now briefly notice some Italian goldsmiths who distinguished themselves in the XVIth century. Giovanni da Ferenzuola, was skilful in his workmanship of table plate and of goldsmith's work properly so called, *cose grosse*; * Luca Agnolo, a good draughtsman, the best workman Cellini knew when he returned to Rome, in 1523; † Pilote, quoted by Vasari as very skilful; ‡ Piero, Giovanni, and Romalo del Tovaloccio, who were unequalled in the art of mounting precious stones in pendants (Fig. 92) and rings § (Fig. 93); Piero di Mino, renowned for his filagree work; ‖ Lantizio di Perugia, who excelled in engraving seals; ¶ Vicenzio Danti, who had executed in his youth, before he devoted himself exclusively to sculpture, some exquisite works in gold; ** nor should we omit Girolamo dal Prato, pupil and son-in-law of Caradosso, who worked at Cremona, and was called the Cellini of Lombardy. A wonderful jewel is cited as

Fig. 93. Golden ring, Italian. XVIth century. Coll. Londesborough.

* *Vita di B. Cellini*, p. 25.
‡ Vasari, *Life of Baccio Bandinelli.*
‖ Ibid. ¶ Ibid. p. 81.
† *Vita di B. Cellini*, p. 34, 49.
§ B. Cellini, *Tratt. dell' oreficeria*, p. lviii.
** Vasari, *Des academiciens de dessin.*

his work, which was offered to Charles V. by the city of Milan, when he entered for the first time within its walls. This artist was skilful in engraving nielli, and excelled in the execution of statuettes and little figures of silver; he also made medallion portraits in gold and silver, which were much esteemed as faithful likenesses. Girolamo flourished in the first half of the XVIth century.* The famous John of Bologna made, in Italy, for the Medici, some bas-reliefs in gold, preserved at the Florence Gallery, in the Cabinet of Gems, considered as fine specimens of goldsmith's work.

From the end of the XIIIth century till towards the end of the XVth, the goldsmith's art in Italy followed step by step the progress of sculpture, with which it was, as it were, identified. The forms became pure and correct; the style was improved by the study of ancient examples; while the large pieces of metal-work for the decoration of churches still preserved a religious character. The XVIth century was marked by a decided taste for classical and mythological subjects, in which the goldsmith's art largely partook. The style formed under this influence was well adapted to jewels and objects of common use, which assumed at that period the most elegant forms; but it proved detrimental to ecclesiastical metal-work, by depriving it of that serious stamp which had distinguished it in the middle ages.

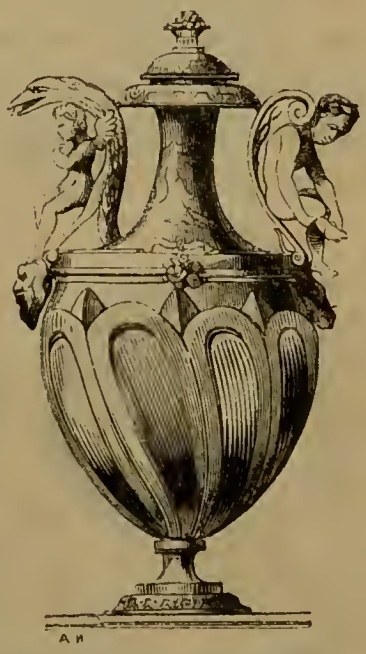


Fig. 94. Cruet. Rock-crystal. Italian. XVIth century. Coll. Soltykoff.

We have already given a chalice of Andrea Arditi (Fig. 88, p. 246), of the end of the XIVth century. Fig. 94 represents a cruet of the first half of the XVIth, of rock-crystal, enriched with figures. These pieces show the diference of style between the two periods.

French goldsmith's work of the XVIth century.

We have reason to believe that, from the beginning of the XVIth century, the French goldsmiths had relinquished the Gothic style, and adopted that of the Italian Renaissance, being influenced by

* Cicognara, *Storia della scult.*, t. ii. p. 415.

the artists whom Louis XII. and Francis I. had attracted to the court of France. Of this we have a proof in Cellini's eulogium on the labours of the Parisian goldsmiths. According to his statement more works were executed at Paris than elsewhere, in "grosserie," a term which included church metal-work, table plate, and figures of silver; the works executed by the hammer had attained there a degree of perfection unequalled by any other country.*

Cellini's residence in France, from 1540 to 1545, must have exercised a great influence over the goldsmith's art, more especially upon the jewellery, in the execution of which he was unrivalled. All the French jewels were then executed in the Italian style. Mythological subjects, therefore, became much in fashion, and occupied almost exclusively the imagination of our goldsmith-artists. In the absence of specimens, the proof of this will be found in the pretty engravings, designed as goldsmith's models, by Etienne de Laulne, who himself followed that profession. The exquisite rings of Woeiriot, a goldsmith of Lorraine, established at Lyons, where he flourished about 1560, partook equally of the Italian taste of that epoch. It is therefore difficult now to distinguish the Italian from the French jewels of the second half of the XVIth century (Fig. 95).

Fig. 95. Ring, silver gilt. Renaissance. Coll. Londesborough.

Moreover, we find in the inventory of the plate and jewels of Henry II., made at Fontainebleau in 1560,† all the jewels mentioned by Cellini in the fifth chapter of his "Treatise on the Goldsmith's Art;" pendants, rings, bracelets, and especially those medallions which were worn in the hair or on the hat, and upon which were executed in "repoussé" work little figures in gold. These medallions, as before remarked, were known in France by the name of "enseignes;" they are thus described in the inventory of Henry II.: "Une enseigne d'or où il y a plusieurs figures dedans, garnie alentour de petites roses. — Une enseigne d'or le fond de lappis, et une figure dessus d'une

* B. Cellini, *Tratt. dell' oreficeria*, p. 130. † MS. Bibl. roy, *fonds Lancelot*, no. 9501.

Lucrèce."* Une enseigne garnie d'or où il y a une Cerès appliquée sur une agathe, le corps d'argent et l'habillement d'or.† "

The taste for these little figures of gold repoussé and chased, did not last long; the glyptich art being then much in fashion, the figures which enriched the "enseignes" were cut out of precious stones, and the drapery and accessories were chased in gold and enamelled; sometimes, also, one part of the figure was executed in hard materials, another part in chased gold. Thus, we read in the same inventory, "Une enseigne d'ung David sur ung Goliat, la teste, les bras et les gambes d'agathe."‡

Fig. 96. Pendant Jewel of the Renaissance, in gold, chased, enamelled, and enriched with precious stones.

We find also in this inventory little figures of animals which served as pendants: "Une lièvre d'or émaillée de blanc. Ung cheval d'or ayant une selle. Une salemandre d'or émaillée de vert." § Fig. 96 is in this style.

Very few names of French goldsmiths belonging to the XVIth century have been transmitted to us. Mention is made of Benedict Ramel, who executed a portrait in gold of Francis I.; François Desjardins, goldsmith and lapidary to Charles IX.; ‖ Delahaie, who was goldsmith to Henry IV. Nor should we omit François Briot, the most skilful artist of his time, although the only examples known of his work are vessels in pewter. A few words must be said upon this description of plate.

Pewters of François Briot.

The high price of the material, as well as certain sumptuary laws, did not always admit of rich citizens possessing vessels of gold and silver. The goldsmiths therefore set themselves to work to make plate of pewter, and citizens in moderate circumstances were thus enabled to adorn the dressers of their dining-rooms

* Art. 331, 329. † Ibid. art, 455. ‡ Ibid. art, 351. § Art. 312.
‖ MS. Bibl. roy., *fonds Saint-Germain*, no. 1803. *Inventaire des bagues et pierreries de la couronne*, des 5 Novembre, 1570.

with vessels which, in form at least, were an imitation of those displayed on the tables of princes.* At the end of the XVth, and in the XVIth centuries, these pewter vessels were so well executed, as to merit a place in the collections of the nobility, and even of princes themselves. The inventory of the personal effects of Charles, Count of Angoulême, father of Francis I., dated 20th April, 1497, makes mention of a considerable service of pewter.† There is no doubt that a great number of these exquisite vessels of pewter were casts which had been made from highly finished pieces of gold-work. Cellini, in his Treatise upon the goldsmith's art, recommends the goldsmiths to take proofs in lead of the pieces of silver executed by casting, such as the handles and spouts of ewers, to repair these pieces, and to preserve them as models for other works.‡ We shall see by and by, that the German artists often followed this plan, and we doubtless owe to its adoption the preservation of so many fine works; the richness of the material has caused the originals of silver to be melted down; the proofs in lead have survived, and attest to this day the skilfulness of the artists who executed the original pieces.

The pewters of François Briot are certainly the most perfect pieces of French metal-work of the XVIth century. The elegant form of his vases, the chaste designs of his decorative figures, the richness of his capricious bas-reliefs, in short, everything he executed, is perfect and worthy of admiration. We know nothing of the life of this artist, but his effigy, as well as his name, is found stamped at the bottom of his finest works. He flourished under Henry II.

Scarcity of specimens of the XVIth century.

Goldsmith's work of the XVIth century, either French or Italian, is very rare (Fig. 97), but the Museum of the Louvre possesses some fine specimens. Jewels, notwithstanding their perfection, have been unable to withstand the fatal influence of fashion, and have been destroyed in the XVIIth century, and more especially in the XVIIIth, during the reign of Louis XV. The public collections in Italy either possess none, or do not

* Monteil, *Hist. des Français*, t. ii. p. 96.
† MS. Bibl. roy., *fonds des Blanc*, Manteaux, no. 49, p. 293.
‡ B. Cellini, *Tratt. dell' oreficeria*, p. 129.

exhibit them. In France, with the exception of some mountings of cameos in the Imperial Library, the museums

Fig. 67. Presentoir, or Stand for handing a cup. Silver gilt, richly decorated with masks and arabesques. XVIth century. Coll. Soltykoff.

are quite destitute of jewellery. There are some fine specimens in the Cabinet of Antiquities at Vienna; but the jewels contained in the other collections of Germany, belong to German art of the XVIIth and XVIIIth centuries, rather than to the period of the Renaissance.

German goldsmith's work of the XVIth century.

Nuremberg and Augsburg became, in the XVIth century, the principal centres of the goldsmith's art in Germany. At a later period, Dresden, Frankfort-on-the-Maine, and Cologne, alike produced skilful goldsmiths. The goldsmiths of Nuremberg preserved in their productions, longer than those of Augsburg, a certain feeling of German art;* but, in the second half of the XVIth century, the productions of the German goldsmiths are so confounded with those of the artists of Italy, in everything relating to the execution of figures, bas-reliefs, and ornaments, that it would be very difficult to distinguish the one from the other, were it not for the form of the vases, which almost always preserved a stamp of originality. Moreover, nothing can be more graceful than the arabesques which enrich the German metal-work of that period, nothing more exquisite than the little twisted figures that form the handles.

The decided taste at the end of the XVIth century, and especially at the beginning of the XVIIth, for these kinds of large *nécessaires*, to which has been given the name of cabinets, and which were made principally at Augsburg, afforded the goldsmith-artists increased opportunities for exercising their talents in the execution of the silver statuettes and bas-reliefs with which the finest of these cabinets are very frequently enriched. The goldsmiths of Nuremberg and Augsburg produced also pieces of sculpture often remarkable for their judicious composition, their purity of drawing, and finish of execution.

In Germany, who has ever been more careful than France of the reputation of her children, a great number of these works have been preserved. The "Chambre du trésor" of the King of Bavaria, and the Imperial Treasury of Vienna, contain many pretty vases of different forms, enriched with fine designs and enamelled figures. Nor are the Green

* Ledebur, *Leitfaden für die Kunstkammer zu Berlin*, 1844. S. 55.

Vaults less rich. Among the most remarkable pieces of which the parentage is known, this museum contains, by Wenzel Jamnitzer of Nuremberg (1508 † 1585), a casket of silver; by D. Kellerthaler, who flourished at the end of the XVIth century, the baptismal basin, with its ewer, of the Electoral family of Saxony, considered as the masterpiece of that artist; another basin, in hammer-work, representing fabulous subjects, and a great number of bas-reliefs. The Chamber of Arts of Berlin contains also several pieces of goldsmith's work, among which should be specified the following examples; by Jonas Silber, of Nuremberg, a cup bearing the date of 1583, ornamented with most perfect chasings; by Christoph Jamnitzer, of Nuremberg (1563 † 1618), nephew and pupil of Wenzel Jamnitzer, an epergne (*surtout de table*), in the form of an elephant, led by a Moor, and carrying on its back a castle, containing five warriors; by Hans Pegolt, of Nuremberg († 1633), a medallion portrait of Albert Dürer; by Matthäus Walbaum, who flourished at Augsburg in 1615, the statuettes of silver which enrich the magnificent cabinet made for the Duke of Pomerania.

There are still existing a number of pieces in gold and silver which enable us to appreciate the merit of the goldsmith-artists of the period of which we are speaking. Besides which, in order to supply the places of the silver originals which have been melted, a collection has been made in the Chamber of Arts, of various fine bas-reliefs in lead, and vases of pewter, enriched with arabesques and figures, which are considered as proofs or casts from pieces of metal-work of the XVIth and XVIIth centuries.

Among the artists who have most contributed to the good style of the German goldsmith's work of the XVIth century, should be also named, Theodor de Bry, who was born at Liège, in 1528, and died at Frankfort-on-the-Maine in 1598. He engraved a number of pretty designs for the goldsmiths. His handles and sheaths of knives are exquisite both in style and finish. Although Theodor de Bry is more known as an engraver than as a goldsmith, there is no doubt that he himself chased, in silver and gold, a few of the pieces for which he furnished designs. The Green Vaults possess a silver table, containing five medallions of gold, surrounded

with arabesques and heads of Roman emperors; this, which bears the monogram T.B., is considered as his workmanship.

Neither should we forget John Collaert, an engraver of Antwerp, born in 1540, who has left two series of patterns for jewels remarkable for their finished execution.

Goldsmith's work of the XVIIth and XVIIIth centuries.

During the first third of the XVIIth century, the productions of the goldsmiths still preserved in France and Germany the character of the style of the XVIth. Very fine pieces of sculptured and enamelled goldwork of the time of Louis XIII., preserved in the Museum of the Louvre, attest the merit of the artists who flourished at that period. Under Louis XIV., in the goldsmith's as in the other arts, the delicate style of the Italian Renaissance was abandoned for larger and heavier forms. The pieces of metal-work, of enormous weight, made by order of the Grand Monarque, may nevertheless be considered as fine objects of art. The designs were furnished by the painter Lebrun, who directed all the artists, and the work was executed by Balin and Delaunay, the most skilful goldsmiths of the time. Louis XIV. retained other goldsmiths in his service. Labarre, the two Courtois, Bassin, Roussel, and Vincent Petit, had all apartments in the Louvre; Julien Defontaine, who was also lodged there, had a great reputation for his jewels.* Even the celebrated sculptor Sarazin († 1660), was engaged in goldsmith's work, and made for the king a gold and silver crucifix of great beauty.† Thus works of this description belonging to the reign of Louis XIV., were still stamped with a high artistic character.

Few results of these splendid labours now remain. In 1688, when France was compelled to contend against almost all Europe, recourse was had to every kind of expedient in order to meet the expenses of the war. The nobility were ordered to bring all the pieces of massive silver they possessed to the Mint. The king set the example; he caused to be melted down those tables of silver, those candelabra, those large seats of massive silver enriched with figures, bas-reliefs, and fine chasings, the works of Balin. They had cost ten millions, and produced three.‡

* L'abbé Demarolle, poem of 1677.
† Perrault, *Les hommes illustres*, vie de Sarazin.
‡ Voltaire, *Siécle de Louis* XIV., chap. xxx.

Purity of style was quite forgotten in the XVIIIth century, affectation and singularity alone were admired.

Of all the industrial arts, jewellery is perhaps the only one which diverted into this path, may yet, by elegance of form, by finish of execution, and by the richness of its accessories, produce some pleasing results. The jewels of the XVIIIth century are now much sought after.

The taste that prevailed in France at the end of the XVIIIth century, diffused itself over all Europe, and even Italy herself, at the opening of the XVIIIth century, had abandoned the exquisite style which had characterised the great goldsmiths of the XVth and XVIth centuries. (Figs. 98, 99.)

Germany, who had hitherto copied them so closely, had

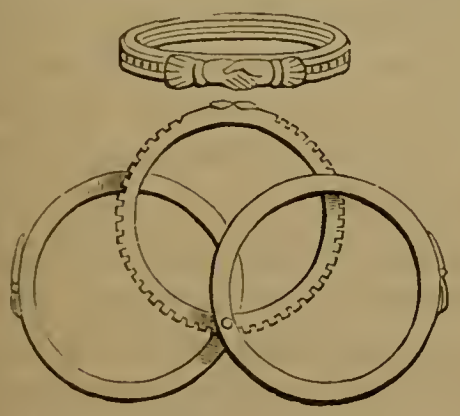


Fig. 98. Gimmel rings, German.

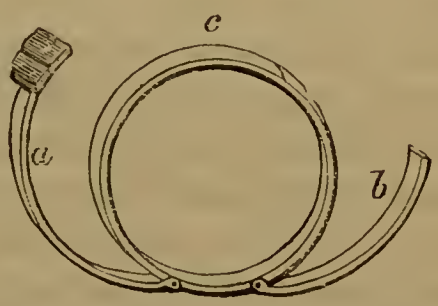


Fig. 99. Magical ring. XVIIIth century. Coll. Londesborough.

now completely set aside the traditions of the XVIth century. We see in the Museums of Germany a large quantity of vases, the bodies of which are formed of mother-of-pearl, of rhinoceros horn, or of the ostrich's egg, with mountings of the most singular description. The work is always very carefully executed, the workman skilful, but purity of style has entirely disappeared. Irregularly formed pearls are conspicuous in the jewel-work of the period.

A few goldsmiths, notwithstanding, had as late as the first years of the XVIIIth century, preserved some traditions of better times, and produced some excellent works. We may cite especially Raimund Falz, and Johann Andreas Thelot. Raimund Falz († 1703), was skilful in chasing, and made a large number of medallions and bas-reliefs, the greater part of which were designed for the Augsburg cabinets. In the

Chamber of Arts at Berlin are collected a number of proofs in lead of the goldsmith's work of this artist. Thelot († 1734) flourished at Augsburg, he has left chasings of considerable merit, and acquired a high reputation by the richness, the taste, and the pure drawings of his compositions. The Green Vaults of Dresden possess of this artist, a bowl of very fine workmanship, representing Venus rising from the sea. We cannot conclude this sketch of the goldsmith's art in Germany in the XVIIIth century, without speaking of J. M. Dinglinger (1665 † 1731), who enjoyed in his time a great reputation. Born at Biberach, near Ulm, he studied the goldsmith's art at Augsburg. In his youth, he travelled and spent several years in France. In 1702 he went to settle at Dresden, and from that period worked almost solely for the Elector of Saxony, King of Poland. Dinglinger excelled particularly in chasing small figures which he coloured in enamel. The Green Vaults of Dresden contain his finest works. The most curious of all is the representation, in little detached figures of about from 2 to 2½ inches high, of the Court of Aurengzebe at Delhi. The Great Mogul is seated upon a magnificent throne, surrounded by his great officers of state. Princes, his vassals, are kneeling upon the steps of his throne, and presenting him with rich offerings, which the officers of his household are eagerly receiving. In the foreground, are courtiers and ambassadors from Asiatic princes, attended by a pompous train, to pay their court to the monarch, bringing with them valuable presents, among which may be noticed elephants with trappings prepared for war, horses richly caparisoned, camels and dogs. All these numerous little figures, chased in gold and enamelled in colours, have been made separately, and the greater number are removeable at pleasure. They are distributed over a plateau of silver, upon which the artist has represented three courts of the palace of Aurengzebe. The court in the back-ground, covered with a carpet of cloth of gold, is surrounded with porticoes and small buildings, in the midst of which is the rich tent that covers the throne of Aurengzebe. Dinglinger executed this work from drawings brought from India, and from the narratives of travellers who had visited the court of that prince; nothing, therefore, can be more

orrect than the costume. The Asiatic ceremonial and iquette are also strictly attended to. Dinglinger's little gures are chased with extraordinary perfection; they have fe, movement, and a highly characteristic expression. He as occupied, it is said, eight years at this work, assisted y his sons and his two brothers, one of whom, George rederick, was a celebrated painter upon enamel, and he so employed fourteen workmen. The Elector of Saxony aid him 58,484 crowns of Saxony for this piece.

Dinglinger was completely enslaved by the vitiated taste f his period; it is grievous that an artist of his merit should ot rather have employed so much time and money in pro-ucing something which might at the present day be ranked nong works of art.

CHAPTER VIII.

THE KERAMIC ART.

The art of making vessels and utensils of baked clay, and of decorating them by modelling and painting, has received the name of the Keramic art.

The abundance of materials suitable for the production of pottery which lie scattered over the surface of the soil, the facility of moulding soft paste into any form whatever, solely by means of the hand, and the possibility of giving it sufficient dryness and solidity by exposure to the heat of the sun, have caused the Keramic art to be one of the first practised by mankind.

Antiquity of the Keramic art.

Accordingly we find it held in honour from the earliest antiquity. If Herodotus may be credited on this point, the Greek vases of the skilful potters of Samos were already celebrated in the time of Homer; and an antiquary, the Abbé de Mazzola, has even gone so far as to assert, that the Campanian or Italo-Greek pottery, so long improperly designated as Etruscan, is anterior to the Xth century before the Christian era.

It is certain that the Greeks held their Keramic artists in such high consideration as to strike medals and erect statues in their honour. The names of a considerable number have been transmitted to us. Who does not know Dibutades of Sicyon, inventor of modelling in terra-cotta; Coræbus of Athens, inventor of pottery, who lived in the time of Cecrops; Talus, nephew of Dædalus, to whom is attributed the invention of the potter's wheel; Thericles of Corinth; Cherestratus, who made more than a hundred canthari a day? The celebrated Phidias, the architect Polycletus, and

he sculptor, Myron, did not disdain to furnish designs of ases for the potters of their time.

The Greek pottery was already rare in the time of Julius Cæsar; yet singular memorials of Keramic industry, from aving been buried in the tombs, have through this, their eligious use, been preserved to us. Unheard of during nore than fifteen centuries, they were only brought to light within these last hundred and fifty years, at a time when earned men could appreciate them as works of art, and gather from them useful hints for history and archæology.

The Etruscans after the Greeks made pottery of their own, lso found at the present day in different parts of ancient Etruria.

The Romans also have left us several kinds of pottery, which differ from each other as to date, materials, and principles of fabrication. Almost all possess some interest as works of art. They are found scattered in all countries over which the Roman empire extended.

But antiquity is not in our province, we must not therefore enter into further details respecting the keramic productions of the ancient nations of Europe; we must rather inquire how the middle ages profited by the models bequeathed to them by antiquity, and collect such documents as may make us acquainted with the finest productions of the art, from the earliest period of the middle ages to the end of the XVIIIth century.

§ I. BYZANTINE POTTERY.

The process of the lustrous glazing of the Roman pottery appears to have been lost about the IIIrd century of our era,* and it is probable that the invasion of the barbarians, and the wars that desolated Europe in the IVth and Vth centuries, were more fatal to the keramic than to any other of the arts; for, excepting the Greeks, who had still preserved a degree of internal tranquillity, all nations, to date from that period, appear to have given up entirely the cultivation of

* Brongniart, *Traité des arts céramiques*, Paris, 1844, t. i. p. 455. We shall often note this work of the learned director of Sèvres, which has furnished us with numerous documents.

the keramic arts, or at least to have confined the application of them to very common purposes.

The Keramic art in the middle ages.

The middle ages, in fact, have left us no artistic pottery, and no written document to lead us to suppose the existence of productions which time might have entirely destroyed. It is not therefore until the beginning of the XVth century that we find among the European nations any pottery but such as has been designed for the commonest domestic use, and none that art has been pleased to decorate.

Byzantine pottery, according to Theophilus.

Thus the monk Theophilus, who wrote in the XIIth century, when he passes in review the industrial arts of all the nations of Europe, mentions only the pottery of the Greeks.

In the sixteenth chapter of the second book of his "Diversarum artium schedula," which he entitles "Of earthenware vases, painted in divers colours of glass," * he thus expresses himself:—"They (the Greeks) likewise made earthenware basins and small vessels and other fictile vases, painting them in this manner. They take all kinds of colours, grinding them singly with water; and mixing with each colour a fifth part glass of the same colour, very finely ground by itself with water, they paint with it circles or arches or squares, and in them beasts, birds, or leaves, or any other thing they may wish. After these vases have been painted in this manner, they place them in the furnace used for window (glass), and apply a fire of dry beech-wood below them until they are surrounded by the flame; and thus, the wood being taken out, they close the furnace. The same vases can also be decorated in places with gold leaf, or with ground gold or silver, if they wish, in the above-mentioned manner." †

* *De Vasis fictilibus diverso colore vitri pictis.*

† "Scutellas quoque fictiles et navicula faciunt, aliaque vasa fictilia, pingentes ea hoc modo. Accipiunt omnium genera colorum, terentes ea singillatim cum aqua, et ad unumquemque colorem miscentes ejusdem coloris vitrum per se minutissime tritum cum aqua, quintam partem, inde pingunt circulos sive arcus vel quadrangulos, et in eis bestias, aut aves, sive folia vel aliud quodcumque voluerint. Postquam vero ipsa vasa tali modo depicta fuerint, mittunt ea in furnum fenestrarum, adhibentes inferius ignem atque ligna faginea sicca, donec a flammis circumdata candescant, sicque extractis lignis furnum obstruunt. Possunt etiam eadem vasa per loca decorare auri petula, sive molito auro et argento, modo quo supra, si voluerint." The description given by Theophilus of the processes employed by the Greeks in the decoration

It results from this passage in the treatise of Theophilus hat the Greeks of the Lower Empire, had a method of lecorating their pottery, both with colours fixed by the action f fire (which are no other than vitrifiable colours, true namels), and with gold and silver leaf applied with the brush. 'heophilus does not say what is the nature of this pottery, nd if it had received any previous glazing. On this point ve have nothing to enlighten us, save that there is not, in any ollection, as far as we know, a specimen of these potteries vith enamelled subjects belonging to the manufactories of the ower Empire. The attention of travellers and antiquaries aving been directed to this point, some may perhaps be iscovered.

If any nation besides the Greeks had manufactured decorative pottery in the time of Theophilus, the learned monk who as given at length the processes of the different industrial rts of all the civilised nations, would not have failed to nention it.* The inferences we drew from his silence assume,

f their pottery, establishes the fact that they used colours which fixed themselves pon the keramic excipient by vitrification, by the help of a strong heat, vitrifiable olours; in a word, true enamels. In fact, vitrifiable colours are composed, as is nown, of two very distinct elements: 1st. of colouring substances, which consist of etallic oxides or natural substances coloured by this kind of composition; 2nd. uxes or vehicles for colour, these are vitreous compositions, by the medium of hich the colouring substances are fixed upon the excipient. Theophilus, like a kilful chemist, shows separately these two kinds of substances of which the vitrifiable olours of the Greeks are composed. "They take" he says, "all kinds of colours," hat is the substances which constitute the colouring,) "grinding them singly with ater." This can only apply to mineral colours, metallic oxides, which alone can esist, without alteration, the high temperature to which pottery is submitted, in rder to fix the colours. "After," continues Theophilus, "they mix the colour" us prepared with the flux, *vitrum*, which has previously been separately ground, *er se minutissime tritum.* Here then are the two constituent principles of vitrifiable olours separately designated.

The flux is in small quantities, *quintam partem*, and the mixture of the flux with ie colouring matter, is heated only when it is employed upon pottery, as it is still ractised in enamels, where the colouring matter is united to the flux by simple ixing.

Moreover, the title of the chapter, would alone be sufficient to show that the olours employed by the Greeks in the decoration of their pottery were true enamels. 'e have seen, in fact, in treating of incrusted enamels (page 109) that by *colores vitri*, heophilus meant the coloured vitreous matter, the enamel, which was melted in ie interstices of the metallic excipient; from this, and from his using the same erms to designate the colours used by the Greeks upon their pottery, we may draw ie inference that these colours had the same qualities as those used in incrustations. he processes to be followed to obtain the metallic oxides, and their use as the olouring principle of vitreous colours, have been explained likewise by Theophilus i the nineteenth chapter of the second book of his treatise.

* We possess a work entitled: *De coloribus et artibus Romanorum*, in which its uthor Heraclius, has explained the different processes of enriching vessels of clay

moreover, a character of certainty after an examination of the ancient inventories. Whenever, among the valuables therein described, we meet with any productions of the keramic art, it is always Oriental pottery. Thus in the inventory of Charles V., in 1379, an immense store, from which we have

and glass with gilding and painting. In the Imperial Library, a manuscript (MS. lat. no. 6741) of this work is preserved, written at the beginning of the XVth century. Émeric David, in his *Histoire de la peinture,* has set forth his opinion, that Heraclius lived at the beginning of the XIth century, and he thence infers that the art of gilding vessels of clay and glass, and of decorating them with paintings in enamel colours, existed in Western Europe at that period.

This opinion is in opposition to that we have just given, and we have thought it necessary to examine the work of Heraclius, and to see if we should draw from it the same inferences as those deduced by Émeric David. After having sought to establish that, Heraclius lived posterior to Isidore of Seville († 636), that he even must be posterior to Charles the Bald, É. David thus continues: "Heraclius se plaint des desordres qui affligeaient Rome de son temps et du mépris où les arts étaient tombés dans cette ville dont auparavant ils faisaient la gloire :

Jam decus ingenii, quo plebs Romana probatur,
Decidit, ut periit sapientum cura senatûm.
Quis nunc has artes investigare valebit?

Ces plaintes ne peuvent se rapporter au pontificat d'aucun des papes qui ont regné depuis Léon IV., contemporaire de Charles le Chauve, jusqu' à Formose; elles prouvent par consèquent que l'auteur a vecu ou vers la fin du xe siècle, sous Jean XI. Jean XIII., ou Benoit IX., indignes pasteurs qui déshonoraient la chaire de Saint-Pierre."

We do not think these deductions correct. In the first place, there is nothing in the three verses quoted that can relate to the disorders with which the popes, at the end of the Xth century, and the beginning of the XIth, dishonoured the papal chair. Heraclius, when going to treat of the different processes belonging to the industrial arts, only complains that the genius for art of the ancient Romans had disappeared, and it requires great wilful perversion to find in these words : *ut periit sapientum cura senatûm,* placed to round the period and complete the verse, any allusion to the popes of the end of the Xth century.

Besides, admitting even that Heraclius lived in the XIIth century, his poem could not be brought in support of the opinion of É. David upon the existence at that period of the art of painting in enamels upon earthenware and glass vessels. In fact, it would appear to result from the whole of the poem of Heraclius, that these arts did not exist in his time. He does not describe the process in use, but many attempts that he had personally made (*nil tibi scribo quidem quod non prius ipse probâssem*) in order to cause the revival of an art which had perished at least in Italy :—

Quis nunc has artes investigare valebit?
Quas isti artifices, immensa mente potentes,
Invenere sibi, potens (*leg.* potis) est ostendere nobis?

Further on, where Heraclius wishes to teach processes, by means of which glass might be carved, an art successfully practised by the Romans under Nero and his successors, he does not give them as being in common use, but only as experiments of his own invention :—

O vos, artifices qui sculpere vultis honeste.
Vitrum, nunc vobis pandam velut ipse probavi.

And after having described a process, one of the most singular and least efficacious, which consisted in rubbing the glass intended to be carved, with a liquid composed

lerived documents of all kinds, we read, folio 199, "Ung petit pot de terre en façon de Damas;" f. 201, "pot de terre à biberon sans garnyson, de la façon de Damas."

The pottery of Damascus then was the only kind deserving place among the valuable objects of every description with which the "garde meuble" of the king was filled. We know that for a long period, Damascus was the most celebrated industrial town of the Greek empire; it had numerous manufactures, which existed after the Arabs had taken possession of the city, and under their domination it still ontinued to supply Europe with its beautiful productions.

§ II. VARNISHED AND ENAMELLED EARTHENWARE OF THE MANUFACTURES OF SPAIN AND ITALY.

It is proved by several fragments of Arabian pottery preerved in the Keramic Museum at Sèvres, and attributed by he learned antiquary, M. Lenormand, to the IXth century, hat even from that remote period, the Arabs of Northern

f goat's blood and vinegar, to which he added some of those great worms turned p by the plough. He adds:

> . . . Quo facto, temptavi sculpere vitrum
> Cum duro lapide piritis nomine dicto.

Does our author wish to speak of glass vases enriched with gilding, *de fialis vitri uro decorandis:* he again only cites them as productions made by the ancient omans, and of which he has occupied himself in discovering the processes; from hich we may draw the inference that they were no longer in practice at the time e wrote.

> Romani fialas auro caute variatas
> Ex vitro fecere sibi nimium preciosas;
> Erga quas gessi cum summa mente laborem,
> Atque oculos cordis super has noctuque dieque
> Intentos habui, quo sic contingere possem
> Hanc artem per quam fialæ valde (re) nitebant.
> Tandem perspexi tibi quid, carissime, pandam.

Thus the poem of Heraclius does not prove what É. David has advanced. It sults from it, on the contrary, that at the time Heraclius lived, the ancient proesses used by the Romans to enamel and gild glass and clay, and to carve glass, ere not in use in the arts, and that this artist-poet was endeavouring to rediscover e processes. But the scientific and entirely speculative researches of Heraclius are r from serving to prove the existence in his time of permanent manufactures which valled in beauty the productions of the Greeks.

É. David wishes to establish that Heraclius was the contemporary of Theophilus. his would come to the support of an opinion, that at the time of Theophilus, in e XIIth century, the Greeks alone knew how to paint glass and pottery with amelled colours; but we should say that we believe Heraclius to have been anterior Theophilus.

Africa, who possessed men learned in the physical and mathematical sciences, were acquainted with the art of decorating their pottery with plumbiferous and stanniferous glazes.*

The manufacture of enamelled fayence introduced into Spain by the Arabians.

In their conquest of Spain, they carried with them the arts and sciences they cultivated; and we may suppose they found it the more easy to put in practice their improvements in the manufacture of pottery, from Spain having probably preserved some traditions of the keramic art, for which she had been celebrated under the Romans. Saguntum, according to Pliny, was not less renowned than Samos for its jasper red pottery.

The Arabs have left much in Spain to evidence the advanced state of their keramic manufactures. The mosques of Cadiz and Cordova, the Alcazar of Seville and the palace of the Alhambra at Granada, are enriched with enamelled tiles of great beauty. One of these tiles is preserved in the Keramic Museum at Sèvres; it bears the inscription in Arabic, "God only is great," the device of the Mussulman founders of the palace of Granada. The glazing of this tile has been analysed at the laboratory of Sèvres, and the presence of lead and tin established. As the Alhambra was built at the end of the XIIIth century, either by Mohammed Ben Alhamar, or by his son Mohammed II. († 1302), and these tiles to all appearance would date from the construction of the palace, a proof has been found in this analysis, that an opaque stanniferous enamel † was known to the Arabs of Spain, at

* M. Brongniart, work before quoted, t. ii. p. 91.

† M. Brongniart, in his excellent *Traité des arts céramiques*, vol. i. p. 171, remarks that travellers and archæologists have often applied the word enamel to the different kinds of glazing with which pottery is covered, and have thereby created a confusion to which it is important to put an end. He shows the essential difference existing between varnish (*vernis*), enamel, and *couverte*, which with names seemingly synonymous, offer in reality very different qualities, and are applied to kinds of pottery very different in their nature, their manufacture, the manner in which they are baked, and their character; he calls *varnish* every vitrifiable, transparent and plumbiferous coating (*enduit*) which melts at a low temperature, generally inferior to the baking of the paste; enamel, an opaque vitrifiable coating, generally stanniferous: it is this which covers earthenware properly so called; glaze (*couverte*) a vitrifiable earthy substance, melting at a high temperature equal to that of the baking of the paste. Such is the glazing upon porcelain and several stonewares.

It is essential to adopt the distinctions of M. Brongniart, when specially occupied with the technical part of the keramic art; but the knowledge acquired of ancient pottery is not sufficiently advanced to render it possible always to observe these distinctions. Yet it is the more to be desired to see them prevail, as by their means, one would certainly succeed in regulating the classification of a class of

east from the end of the XIIIth century, and consequently more than one hundred years before Luca della Robbia produced in Italy his bas-reliefs in enamelled earthenware. These productions, moreover, indicate a state of advancement in the art, and there is reason to believe that much before the XIIIth century, the Arabs of Spain were in a condition to produce ornamental pottery. May we not suppose a common origin to the keramic processes imported into Spain by the Arabs, and to those which the Greeks of the Lower Empire, according to Theophilus, practised in the XIIth century?

Fig. 100. One of the Jars of the Alhambra.

The celebrated vases of the Alhambra (Fig. 100), are the most remarkable specimens extant of the keramic art as practised by the Hispano-Arabs.* The rich ornamentation and brilliant colouring of these vases, and the precision of the designs with which they are covered, render them works of great value. It is possible that their manufacture may be referred to the period of the building of this palace; they

productions, so remarkable for its decorations, and so essentially united with the general history of art. Nevertheless, we should say, that if the name *enamel* ought only to apply to opaque coatings when speaking of pottery, this rule cannot be absolutely applied in other cases. Thus the name enamel has been always given to the vitrifiable colours used for painting upon glass, to those used by the Limousin enamellers of the XVIth century in their polychromatic paintings, and even to the vitreous coloured substances employed for covering chasings upon metal, and which constitute with it what we have termed translucid enamels upon relief. If, according to the definition of M. Brongniart, the name of enamel is improper with respect to these vitreous colours, as they are not always opaque and may not contain tin, yet custom has assigned to them the name of enamel, which we have retained.

* They have been described and figured by M. de Laborde in his *Voyage en Espagne*, t. ii. pl. lxv. and lxvi, p. 25, and in Murphy's "Arabian Antiquities of Spain."

cannot be later than 1492, the date of the taking of Granada by the Spaniards.

The taste for ornamenting objects of daily use has been in all ages so natural and so prevalent, that there can be no doubt that the Arabs established ornamental potteries in the different parts of Spain under their dominion, and that these manufactures continued in their hands till the period of their final expulsion under Philip III., at the beginning of the XVIIth century.

This Hispano-Arabic pottery long remained unrecognised and confounded with the Italian majolica, which is only an imitation of it; but since archæology has extended its researches to all the works of domestic use, the curious productions which belong to the Hispano-Arabic manufactures, have been traced to their rightful origin. M. Riocreux, the learned conservator of the Musée Céramique of Sèvres, was the first to point them out and bring them into notice.

Description and classification of the Hispano-Arabic pottery.

The enamel of this pottery is of a yellowish white, covered with an iridescent metallic lustre, such as we find in the Italian majolica of the end of the XVth and of the beginning of the XVIth century. The metallic reflexions appear to proceed rather from the ornaments placed upon the whitish ground, than from the ground itself. These ornaments are of a colour varying from a golden-copper red to pale golden yellow. From the colour of the ornaments with which this pottery is enriched, it appears to us that it may be divided into three classes, belonging to different manufactures, and probably to different periods.

The first class includes those potteries of which the ornamentation is of a very brilliant colour, approaching rather to copper-red than to gold. The ground in this kind of pottery is almost hidden by the designs, consisting always of birds sporting in the midst of flowers, much resembling in style the drawings upon Persian pottery and some of the decorative paintings of the Alhambra.

The pottery of this class appears of a less perfect manufacture than that with golden yellow designs, and we consider it as the most ancient of all.

An example of this kind we find in the Museum of Sèvres,

a large dish, upon which are represented birds in the midst of flowers.

We would reckon, as composing the second class of Hispano-Arabic pottery, those pieces with monochromatic designs, of a golden yellow tint, representing generally, with ornaments in the Moresco style, escutcheons indicative of a Spanish origin. These are generally the shields of Castille, Leon, and Aragon, and of those reigning families among whom, in the middle ages, the Spanish peninsula was divided.

Among the pieces, in the Museum of the Louvre, of this second class, we find a most curious specimen. It is a beaker of archaic form, having round the edge an inscription, evidently by the hand of an Arabian workman, formed of the word *ubas** (grapes) several times repeated; the letters running from right to left, as in Arabic writing.

To determine the age of this class of pottery by the escutcheons with which it is decorated, we should place its manufacture in the XIVth, or perhaps the XIIIth century; but, to decide this point with any degree of certainty, a great many specimens should be examined, and the escutcheons and inscriptions taken down; but at present too few have been collected to justify us in hazarding any positive opinion.

In the Keramic Museum at Sèvres, there are two very interesting dishes with escutcheons. The one bears a shield party per pale Aragon, flanked on the dexter with Castille and Leon, party Navarre-Evreux. These are the arms of Blanche of Navarre, daughter of Charles III., King of Navarre, to whom she succeeded in 1425. The dexter side of the shield contains the arms of John of Aragon, Duke of Panafiel, to whom this princess was married in 1419;† the sinister side her own.‡ She died in 1441. This dish has therefore an almost certain date, since it must have been made for Blanche of Navarre subsequently to her marriage with John of Aragon, that is, between 1419 and

* For *uvas*, the Spaniards using indifferently the *b* for the *v*, and the *v* for the *b* before the vowels.

† Le Père Anselme, *Histoire généalogique et chronologique de la maison de France.*

‡ The shield of Evreux is semé of France with a bâton compony argent. In the dish at Sèvres, the painter has omitted the bâton compony. But the arms of Navarre, supported by the shield of France ancient, joined to the shield of John of Aragon, Duke of Panafiel, can belong only to the Princess Blanche, Queen of Navarre.

1441. The other dish in the Museum of Sèvres is of a more careful workmanship; the ground is occupied by a shield, party per pale Castille and Leon, and Aragon-Sicily, which is that of Ferdinand and Isabella. This dish must have been made during the time of their union, that is, from 1469 to 1564.

The fine keramic collection of the King of Prussia, preserved in the Chamber of Arts, possesses a dish decorated with the arms of Aragon-Sicily alone. It is therefore probably of a later date than 1409, the period of the definite annexation of Sicily to the kingdom of Aragon, and may perhaps be anterior to the union of this kingdom with Castille by the marriage of Ferdinand and Isabella.

The Hispano-Arabic pottery, comprising the third class, presents ornaments of coloured enamel, united with ornaments of golden yellow; the subjects are almost always armorial bearings, foliage and interlacings; sometimes, however, we see animals: a dish, in the collection of M. Piot, bears, upon a ground semé with interlacings of a golden yellow, an antelope painted in blue.* Upon the rim of the dish is this Spanish inscription: "Senta (*sic*) Catalina guarda nos." The pottery of this kind, which is in general very carefully executed, does not appear to go further back than the last years of the XVth century. We should be disposed to think that, in the first years of the XVIth century, this third class of Hispano-Arabic pottery was imitated in Italy, where it may very often be met with.

There is need, as may be seen, of many further researches before we are enabled to trace in any certain manner this Hispano-Arabic pottery; yet the dish of Blanche of Navarre establishes the degree of perfection to which this ware had reached in the first half, perhaps even in the first quarter, of the XVth century, and proves that its manufacture should be referred to a much earlier period, decidedly anterior to that at which Luca della Robbia († 1430) made use of a stanniferous enamel to colour his earthen reliefs. Accordingly Spain must take precedence of Italy in the manufacture of enamelled earthenware.

Moreover, it had become a received tradition in Italy, from the beginning of the XVIth century, that their processes for

* Now in the British Museum.

he manufacture of earthenware had been imported into hat country by Arabian or Spanish workmen, from the Balearic islands. Julius Cæsar Scaliger * tells us hat a very costly fayence, so beautiful as to be ompared with the pottery of India, was made in is time at Majorca; and he adds that the name majolica, given to the Italian fayence, is derived from Majorica.†

Keramic processes of the Hispano-Arabs carried to Italy.

This opinion continued to exist in Italy after Scaliger: Fabio Ferrari, in his "Origin of the Italian language," says hat the word majorica has been changed into majolica by a ertain coquetry of language, "per un certo vezzo di ingua," and the Dictionary della Crusca, in giving the defini-ion of majolica, adds, that it is thus named from the island of Majorca, where it was first manufactured.‡ It must be emarked that this island was conquered by the Arabs, when hey invaded Spain in the VIIIth century, and remained in heir possession till the year 1230, when it was wrested from hem by the Aragonese. They had doubtless established in his island the manufacture of this beautiful iridescent fayence, he processes of which were introduced into Italy in the XVth century.

Besides, the Hispano-Arabic workmen must have found taly well disposed to make use of their keramic rocesses. From about the XIIIth century, a ottery had been manufactured there which, hough coarse, was already overlaid with a coloured varnish. Such at least is the opinion of Passeri, who states, having found some varnished pottery upon a tomb, the construction of which dated back to the year 1100.§

Keramic art in Italy from the XIIth to XVth century.

It is probable that the coating laid over the pottery of that period allowed the dirty colour of the paste to show through; for, towards the year 1300, they began to cover the raw clay with a coating of white opaque earth, procured from the Siennese territory, and vulgarly called "earth of St. John," in order to form a ground which would better bring out the

* Born near Verona in 1484, died at Agen in 1558.

† *Exotericarum exercitationum.* Exerc. 92.

‡ "Majolica sorta di vasi di terra simile alla porcellana, così detta dall isola di Majorica dove prima se facevano."

§ Passeri, *Istoria della pitture in majolica.* Ed. Pesaro, 1838. Passeri was born in 1694, p. 301.

brilliancy of the colours. The clay, after having received a half baking, was coloured with a kind of varnish called "marzacotto," and carried back to the fire, where it acquired all its lustre.* This interposition of an opaque, white substance, technically called a coating or "engobe," formed quite a new process, differing essentially from the more ancient methods, and may be considered as the starting-point of majolica.

Pottery overlaid with a coloured varnish was used in the decoration of buildings. The façades of the churches of St. Agostino and San Francesco, at Pesaro, were still enriched, in the time of Passeri, with concave basins which reflected the rays of the sun, and produced a beautiful effect.† M. Du Sommerard mentions several churches belonging to different periods of the XIVth century, where he has met with these decorations of varnished earthenware, as, for example, that of San Pietro in ciel d'ora at Pavia, that of San Francesco at Bologna, and of Santa Maria at Ancona.‡ We may also point out the Church of San Martino at Pisa as having in its façade pottery of this description.

This opaque varnish laid upon pottery, continued to improve until towards 1450, the period when the Sforzi, lords of Pesaro, began to occupy themselves seriously with the Keramic manufacture, and granted it privileges and encouragement.

But before we enter upon the history of Italian majolica, we must speak of the productions of Luca della Robbia, the first in Italy to apply a stanniferous enamel upon terra-cotta.

Enamelled ware of Luca della Robbia.

Like most of the most celebrated artists of his age, Luca della Robbia§ began by working with a goldsmith, Leonardo, the most skilful in Florence. Under his direction he learned to draw and model, but his genius found itself too much cramped in the workshop of an artisan, and he gave up the goldsmith's art to devote himself to sculpture, in which he met with great success. We will not follow Luca in his career as a sculptor; it will be sufficient to point out the bas-reliefs of Santa-Maria del Fiore,

* Passeri, p. 31. † Ibid. p. 29. ‡ *Les Arts au moyen âge*, t. iii. p. 73.

§ In the first edition of Vasari, we read that Luca died in 1430, aged 75, and in the second edition, that he was born in 1388. The first version appears the more correct. Luca had learned the goldsmith's art under Leonardo, whose works are dated from 1366 to 1371.

ıe bronze doors of the sacristy of that church, and the bas-:liefs representing musicians and singers, now preserved in ıe Florence Gallery, as affording abundant evidence that he ınked highly among the great artists of his time. But Luca as impatient to make his fortune, and contemplating the ender profits which he reaped from his works, compared ith the time and labour they cost him, he turned his atten-on to finding a more lucrative occupation. It occurred to im that clay being worked more easily than either marble or ronze, he had only to discover a ıethod of imparting to it durability, ı order to render works in clay a ource of great emolument. After ımerous attempts, he succeeded ı giving to his sculpture in clay ıe brilliancy and durability of ıarble, by glazing them with a hite enamel, opaque, very hard nd without cracks.

Fig. 101. Altar-piece by Luca della Robbia. Church of San Miniato, Florence. XVth century.

Was Luca really the inventor of he white, stanniferous enamel with hich he covered his plastic works, r had he become acquainted with he processes long before employed y the Arabs? We cannot determine he question. Be this as it may, he application of an enamel glaze hat could bear exposure to the air o works in baked clay, a substance o easily modelled and at so ttle expense, brought great as-istance to architecture. Luca's as-reliefs in enamelled earth vere sought for the decoration of all kinds of edifices, nd particularly for churches. His first works in terra-cotta vere placed over the door of the two sacristies of Santa Maria lel Fiore. They consisted of two bas-reliefs of very large limensions, representing the Resurrection and Ascension of Christ, and were then, as they still are, deservedly the objects of admiration. (Fig. 101.) Not satisfied with his useful inven-

tion, Luca continued to improve it and found a method of colouring his white enamel. The colours he employed are principally yellow, opaque blue, copper, green, and violet.

The fame of his works having spread in a short time not only over Italy but throughout all Europe, he found himself unable to execute the orders that poured in upon him, and therefore invited his brothers Ottaviano and Agostino, sculptors like himself, to take a share in his labours.

These, after the death of Luca, continued to work in the same style. Their descendants followed a like path; Andrea, nephew of Luca, who died in 1528, at a very advanced age, made a large number of enamelled sculptures, and especially detached figures of great merit. Three of his sons, Giovanni, Luca, and Girolamo, devoted themselves to this art, which was the exclusive property of their family. Girolamo was taken to France. He built near Paris, for Francis I., the Château de Madrid,* which he decorated with considerable works in enamelled earthenware. He died in France in the reign of Henry II. With him expired the Della Robbia family, and the art of working sculpture in this kind of enamelled terra-cotta, which invention is due to Luca.†

A new impulse was doubtlessly given to the keramic art in Italy, by the discovery of Luca della Robbia, and we shall consequently see how, shortly after his death, the keramic

* In 1530, Francis I. ordered it to be built as a hunting seat, and it was styled the "Château de Bologne," but the king was so impatient to inhabit it, that he occupied one part before it was finished. While there, Francis devoted himself to the study of the arts and sciences, in company with a few distinguished artists and learned men, and was inaccessible to the crowd of courtiers, who, stung at their exclusion, and making allusion to his long captivity, styled the château in derision, Château de Madrid, which name it has since borne. The principal salle was decorated with superb bas-reliefs by Girolamo della Robbia, representing the Metamorphoses of Ovid. When, in 1550, Philibert Delorme was charged by Henry II. to complete the northern façade which was unfinished, he condemns (in his work published 1567) the use of the enamelled faycnce that had been employed for the other three façades and abstained from using it himself, calling the edifice a "château de faïence." In the account of expenses of the château, we find for the works in enamelled terra-cotta of Girolamo delle Robbia a sum total of 38,860 livres (about £15,530). The Château was inhabited successively by Henry II., Charles III., Henry III., Henry IV., and Louis XIII, and was not deemed by Louis XIV., sufficiently magnificent. It was sold as national property for 648,205 livres assignat (about £8000), and ordered to be demolished. It was sold in parts, and the objects in enamelled terra-cotta were purchased by a paviour, pulverised and converted into cement.

† Yet Vasari says, at the end of the life of Verocchio, that a woman of the family of Andrea della Robbia communicated the secret of making enamelled sculptures to Benedetto Buglioni, of whom he mentions several works, and that he transmitted his secret to Santi Buglioni, who alone was in possession of it, at the time Vasari wrote (about 1555).

tists began to call in the assistance of painters to decorate eir productions.

We have before mentioned, that the Lords of Pesaro, after 50, gave encouragement to the manufacture of rthenware. It was about this period that bjects were first painted upon pottery. From decree of the 1st of April, 1486, granting veral privileges to the keramists of Pesaro, we learn that e potteries of that town had already acquired a great repu-tion, not only in Italy but in foreign countries.* The anufactures of Urbino, Gubbio, and Castel-Durante, then joyed an equal reputation with those of Pesaro.

Italian Keramics of the last half of the XVth century.

In the pottery of this period, to which Passeri gives the me of *mezza-majolica*, the outlines of the figures are traced blue or black, the flesh remains white, being rendered by e ground, and the draperies are coloured. The drawing is lerably correct, but hard and dry; we find no shades or lf tints in the painting; but that which renders these early ajolica very curious, is its metallic, iridescent lustre, which e have already pointed out in the Hispano-Arabic earthen-are.

The finest works of this class are the dishes of an artist ho flourished at Pesaro about 1480. Passeri describes ese dishes so minutely, that it is impossible not to recognise em when met with.† They are made of a flesh-coloured rth, and are remarkable for their size and thickness. hey rest upon a little circular elevation (*giretto*), perforated ith two holes to receive a string by which they were spended, which shows they served rather for decoration an as domestic utensils. The hollow part of the dish is enerally enriched with half-length figures, sometimes even ith whole figures, painted upon a white ground, which is ft to express the light parts of the flesh. This pottery is emarkable for a ruby red colour employed in the draperies nd the decorations. The secret of this colour, afterwards in se at Gubbio, in 1518, was completely lost about thirty ears afterwards. There also occurs an iridescent yellow, hich has all the appearance of gold. The edges of these lates are embellished with coloured ornaments, among which

* Passeri, Work before quoted, p. 32. † Passeri, p. 42.

imbrications are the most conspicuous. Lastly, the reverse is glazed with a yellow varnish coarsely applied.

Application of the stanniferous enamel to pottery.

The white stanniferous enamel had been used at Florence, in the first year of the XVth century, by Luca della Robbia. Yet it is probable that the process of the preparation of this enamel was not known immediately after his death, and that the secret was preserved by his family as long as they could. The manufacturers of Florence * and Faenza † were the first to cover their pottery with a white enamel glaze. It is doubtless from this circumstance that the name of fayence, from Faenza, is now improperly given to all the enamelled earthenware of Italian manufacture.

The beauty of this newly-adopted white enamel induced the manufacturers of Florence and Faenza to produce an entirely white earthenware ;‡ and when, later, they followed the example of the potters of the Duchy of Urbino, and enriched their fayence with coloured designs and arabesques, they often preserved the white enamel ground without covering it with colour, a distinguishing characteristic of the pottery of these manufacturers from those of the Duchy of Urbino.

Majolica, from the end of the XVth century to 1538.

It was not until towards the end of the XVth century that the manufacturers of Urbino, Gubbio, Castel-Durante, and Pesaro § began to use white enamel to form the glaze of their pottery and to serve as a ground for those beautiful paintings which have earned for the Italian ware of the XVIth century so wide-spread a reputation. A dish in the Museum of Sèvres, with the date 1485, and the name of Giorgio, an artist who worked at Gubbio, is covered with stanniferous enamel on the inside only; the back is not coated with it. We here recognise the first attempts to apply enamel as a glaze upon pottery, a process which constitutes the true majolica, the *majolica-fina*. The manufacture of this fine majolica was different from that of the mezza-majolica. After having lightly baked the pieces,‖ they

Technical processes of majolica.

* Passeri, work before quoted, p. 45. † Garzoni, *La piazza universale*, discorso, xlvii.
‡ Decree of Guidobaldo II., in 1552, given by Passeri, p. 35.
§ Passeri, p. 43, 45.
‖ "Si cuoci il vaso a bistugio." Passeri, p. 43. This is technically called *dégourdi*.

ere plunged into a liquid preparation composed of oxide of ad, oxide of tin, sand and potash, finely ground and mixed ith water. The oxide of tin was introduced in larger propor-ons when a thicker and harder enamel was to be produced. y this simple and rapid process the pieces thus prepared ere covered on both sides with a vitrescent coating which, y its opacity, entirely concealed the dirty colour of the paste. aintings in vitrifiable colours were then executed upon is coating, and the pieces afterwards taken back to the rnace to receive their complete firing.

The keramic artists having thus discovered the process of new ground preferable to e white coating of the ezza majolica, next directed eir attention to the im-rovement of the colours ready known, as well as to e discovery of new ones. mong the last are specially eserving of notice a kind vermilion and a green hich gave the different tints the foliage. Skilful artists en began to devote them-lves to painting upon earth-ware; they were no longer tisfied with decorations nsisting merely of arms, liage, ornaments, or single gures; they arrived at the presentation of historical bjects, and copied the cartoons furnished for them by inters of reputation. Timoteo della Vite, a distinguished inter of Urbino, who died in 1524, is cited by Passeri as ving supplied a large number of designs for the Keramic tists of the beginning of the XVIth century.

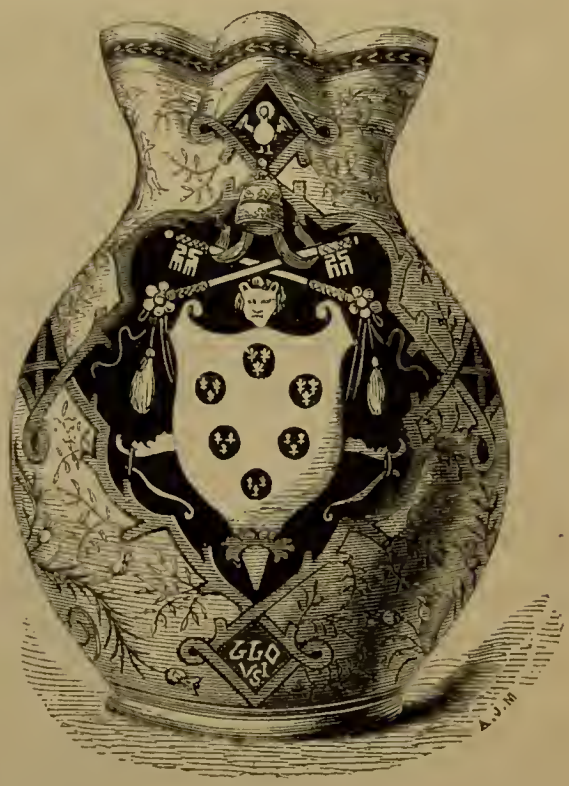


Fig. 102. Majolica jug. Cir. 1520. Coll. Bernal.

The paintings upon majolica anterior to 1530 are still mewhat hard and dry (Fig. 102); but to date from that eriod the art constantly progressed, and the productions the manufactories of Pesaro, Urbino, and Gubbio had

attained to great perfection when Guidobaldo II. became sovereign of the Duchy of Urbino in 1538.

Among the most celebrated artists of the first period of the fine majolica, which extends from its invention to the accession of Guidobaldo II., we must name Giorgio Andreoli, the founder of the manufacture at Gubbio, about 1485, as is proved by a dish signed by him, in the Museum at Sèvres. He associated in his works his two brothers, Salimbene and Giovanni. Giorgio Andreoli was a stranger to the town of Gubbio; but, in 1491, his fine works procured for him admission to the rights of a citizen, and he was elevated to the patrician order. He was not only a painter, but also a modeller. Passeri mentions two bas-reliefs executed by him in majolica to decorate the fronts of altars. His sculptures in enamelled earthenware have not descended to us, but his dishes, enriched with fine paintings, are to be found in a considerable number in collections. They are more especially remarkable for the vigour and richness of their colouring; we find on them the golden yellow, the ruby red, and that metallic lustre which gives such wonderful brilliancy to the early majolica. He signed his works with the monogram M° G° (Maestro Giorgio), written in ill-formed cursive characters. The best works of Giorgio are dated 1537,* it is supposed that he lived until 1552. Vincenzo, one of his sons, followed his profession, and became a noted keramic painter, under the name of Maestro Cencio.

We should also mention Francesco Xanto, surnamed Rovigo or Rovigiese, from the name of his native town. This artist flourished at Urbino from about 1530 to 1540. The Museum of the Louvre possesses two dishes painted by him, dated 1532 and 1533. We have seen works of his dated 1534 and 1535; and in the Debruge-Labarte collection were two dishes of 1538, some of the best specimens of this artist; they had his monogram, F. X., at the back. We also often find in the paintings of Francesco Xanto the fine vermilion red and the metallic lustre which soon after his time ceased to be employed.

Painting upon majolica was, as we have said, already successfully practised at the accession of Guidobaldo II. A passionate admirer of the fine productions of the keramic art,

* Passeri, Work before quoted, p. 59.

which were the glory of the principal towns of his duchy, Guidobaldo lavished every kind of encouragement upon the manufacturers of majolica, and, above all, he strove to improve the style of the paintings so as to make this earthenware a real object of art. With this view, he collected a large number of original drawings by Raffaelle and his pupils, and gave them as models to his keramic painters, among whom were some very good draughtsmen. We sometimes find upon majolica compositions evidently designed by Raffaelle, though they have neither been painted nor engraved, and also copies of his large well-known works, differing in some points from the originals; there is no doubt that these paintings have been executed

Second period of Majolica, 1538 to 1560.

Fig. 103. Majolica dish. An artist painting a plate, a lady seated beside him. Coll. Bernal.

from sketches by this great master which have been been lost. This gave rise to the belief that Raffaelle himself had painted in enamel upon majolica. (Fig. 103.) On this subject, Passeri observes that all the vessels of majolica,

upon which he has seen compositions of Sanzio, bear a date subsequent to his death.

Guidobaldo dispersed also in the workshops of Pesaro, Gubbio and Castel-Durante, (a town now called Urbania,) the engravings of Marc Antonio. Soon, he was not satisfied with copies; and when he presented to sovereigns services of his majolica, which then received, from its beauty, the name of porcelain, he desired to have them decorated with none but original paintings. He employed Battista Franco, a Venetian painter, whom he invited to Pesaro, to make designs for the keramic painters. Vasari highly extols the paintings executed after the cartoons of this master, upon the vases which formed part of the service sent by Guidobaldo as a present to Charles V. These paintings, he says, could not have been more beautiful had they been painted in oils by the first artists.* Battista Franco, who had begun about 1540 to work for the Duke of Urbino, did not return to his own country until shortly before his death, which took place in 1561.† Raffaelle dal Colle, an artist of talent, who resided a long time at Pesaro, made a number of drawings for the artists in majolica. Guidobaldo also ordered for their use cartoons from the most skilful Roman painters, as we learn from a letter addressed by Annibal Caro to the Duchess of Urbino, dated the 15th of January, 1563.‡

It will readily be imagined, that by means of such assistance, Guidobaldo succeeded in forming keramic artists of great merit. (Fig. 104.) Among the most celebrated, special mention must be made of Orazio Fontana of Urbino. He worked for the Duke of Urbino from 1540 to 1560, and carried enamel painting upon majolica to its highest perfection. He painted the vases retained by Guidobaldo for himself, and also those given by that prince as presents to sovereigns. After the death of Francesco Maria, last Duke of Urbino, the vases belonging to the Spezeria of the palace of Guidobaldo were carried to Loreto, where they are still to be seen. When Christina of Sweden visited Loreto, she was so delighted with their beauty, that she offered to exchange these vases for an

* Vasari, *Life of Battista Franco.* † Passeri, Work before quoted, p. 72.
‡ Lettere del commendatore Annibal Caro, vol. iii, p. 187. Ed. Milano, 1807.

equal number of silver.* The productions of Orazio Fontana are generally marked with the monogram V—O—F—F., *Urbinate Orazio Fontana fece;* these letters are arranged in three lines, within an oval. He entered the service of Guidobaldo II. in 1540, and died about 1560.

The successful career of the keramists belonging to the Duchy of Urbino, excited the emulation of all the other sovereigns of Italy; and manufactories of majolica arose in numerous towns. The Cavaliere Piccolpasso, a keramic painter of Urbania, about 1550, informs us, in the notices he has left of his art, that celebrated manufactories existed in his time at Rimini, Faenza, Forlì, Bologna, Ravenna, Ferrara, Spello, and Città da Castello. Perugia also had a manufactory in the village of Deruta.

Fig. 104. Majolica drug bottle, "Vaso da spezeria."

The most celebrated keramic artists of this second epoch, extending from the accession of Guidobaldo II. to a few years beyond 1560, are, besides those already mentioned, Flaminio Fontana, brother of Orazio, who was called by the Grand Duke of Tuscany to Florence, and who introduced there a good system of vase painting; † Guido Selvaggio at Faenza; Guido Durantino at Urbino; Girolomo Lanfranco, Giacomo, his son, Terenzio, son of Matteo, and Taddeo Zuccaro at Pesaro.

Keramic artists of talent also carried their processes into foreign countries. Piccolpasso mentions that the three brothers, Giovanni, Tiseo, and Lazio Gatti of Urbania, esta-

* Passeri, Work before quoted, p. 73.
† Lanzi, *Histoire de la Peinture*, translation of Madame Dieudé, t. ii. p. 179

blished themselves at Corfu, and a certain Guido, son of Savino, of the same city, at Antwerp.

Majolica, from 1560 to the beginning of the XVIIth century.

The deaths of Orazio Fontana (about 1560) and of Battista Franco, and the departure of Raffaelle dal Colle from Pesaro, were signals for the decline of majolica painting. The cartoons of the great masters were no longer the sole models of the keramic painters, who, from this period, began to work

Fig. 105. Majolica fruit-dish, ornamented with "amorini" trophies and arabesques. Coll. Berna

from the Flemish engravings.* Landscapes, as well as arabesques (Fig. 105), became much in fashion, and shortly afterwards, the artists almost wholly discontinued compositions of a more elevated style. We must, however, admit that, in

* Passeri, Work before quoted, p. 98.

landscapes, they produced, after 1560, some works of the highest excellence.

The discontinuance of historical subjects permitting the employment of inferior artists, a greater number of pieces were produced by the keramists, but, as a consequence, fewer of real merit. The old age of Guidobaldo II. also hastened the ruin of this brilliant manufacture. Oppressed by enormous debts, contracted to build numerous edifices which he embellished with works of art, this prince, at the close of his life, was no longer able to maintain great artists to direct his keramic painters, or even to give the latter sufficient encouragement. Francesco Maria II., who succeeded him in 1574, directed his sole attention to repairing the finances of his state; he even withdrew the allowance made latterly by his father to prevent this ornamental art from becoming totally extinct. Abandoned then to its own resources, it became a prey to the rivalry of private interests, and soon produced hardly any but common pieces adapted for daily use. Yet some painters maintained, after the death of Guidobaldo, the artistic excellence of their predecessors. Passeri cites, as artists of talent, at the end of the XVIth century, Alfonso Patanazzi, and Vicenzo Patanazzi, probably his son, who painted at the age of twelve, in 1620, after the engravings of Sadeler.* Shortly afterwards this kind of pottery, which belonged rather to painting than to the industrial arts, was entirely given up in the Duchy of Urbino. Passeri informs us, that on his arrival at Pesaro, in 1718, he found there one manufactory of pottery, which only made common earthenware for the most ordinary purposes; majolica was entirely forgotten.

Character of the painting on majolica and various works of the keramic artists from 1538.

It now only remains for us to describe the different works carried on by the manufactories of this duchy, and of the other towns of central Italy, from the accession of Guidobaldo II. to the extinction of the art at the beginning of the XVIIth century, and to show what characterises the paintings of the two last epochs of fine majolica.

There is no doubt that Guidobaldo II. impressed an artistic character on the enamelled earthenware of his states, by giving as copies to his keramic artists the original drawings

* Passeri, Work before quoted, p. 61.

of Raffaelle (Fig. 106) and his pupils, by distributing among them the prints of Marc-Antonio, and above all by entrusting to Battista Franco, a skilful draughtsman, who had made a particular study of the works of antiquity, the direction of the school for painting upon majolica. But although the drawing was improved, the paintings executed from the accession of Guidobaldo appear to us to have lost in colouring. For instance, in the majolica posterior to about 1540, we no longer meet with the metallic lustre with iridescent light that the Italians derived from the Hispano-Arabic keramists, and of which the process appears to have been employed at Pesaro after 1450. We no longer find the ruby red which Passeri points out in the works of that skilful enameller of Pesaro, who flourished in 1480, and which we afterwards find in the works of Giorgio Andreoli, and in several pieces of Francesco Xanto. Some years after 1538, the fine vermilion colour which we have shown in the works of this artist also disappears. Passeri suggests an enquiry as to whether the secret of this colour was lost about this time, or whether it was rather not purposely abandoned, as being difficult of employment, and injuring by its brilliancy the soft and light

Fig. 106. Majolica vase. The Triumph of Galatea. After the fresco by Raffaelle in the Farnesina Palace, Rome. Coll. Marryat.

colours in use during the second period of the fine majolica. There is reason to believe that the true motive for its discontinuance was the difficulty of making it adhere to the enamel of the ground. We have often found majolica in which the colour is unequally diffused, as, for instance, a dish in the Louvre (No. 2219, D), executed by Francesco Xanto.

With some perseverance, the artists who occupied themselves more specially with the composition of colours, might probably have succeeded in preserving this vermilion, which, employed with moderation, would have produced beautiful effects; but from the accession of Guidobaldo more attention was paid, as we have said, to the improvement of the drawing than of the colouring. To give a high character to the compositions seemed then to be the great object.

Moreover, the keramic painters of the first epoch of majolica had never employed red in the carnations, this colour being too difficult to handle. They used, although with timidity, some touches of a yellow ochre bordering upon a red brown. After 1540, we no longer see this colour; the painters adopt for the carnation a light yellow which, in the shaded parts, degenerates into green. For the draperies, grounds, and landscapes, they have two or three tints of blue and different tints of yellow and green; we find also upon their pallette a light violet and black. We must not forget a very brilliant white with which they heightened the lights of their compositions. This white, the process of which was lost at the beginning of the XVIIth century, was called "bianchetto." They also used it, by giving it a lightly shaded tint, for executing grisailles upon a white enamel ground; this kind of work was called *sbiancheggiato*.* The keramic artists also painted with the bianchetto upon a black or dark blue ground.

It was not until about 1550 that arabesques were painted upon majolica (Fig. 107). Battista Franco, who furnished many designs of this kind, introduced at intervals in his compositions cameos copied from ancient gems, of which the figures were painted in bianchetto on a black ground.†

In 1569, Giacomo Lanfranco, son of Maestro Girolamo

* Passeri, Work before quoted, p. 82. † Ibid. p. 83, 89.

Lanfranco, one of the most celebrated keramic painters of Pesaro, discovered the method of applying gold upon majolica. Guidobaldo, by a decree dated the first of June, 1569,

Fig. 107. Majolica Dish. Probably after a design of B. Franco. Arabesques in Grisaille on a blue ground. 1550. Marlborough House.

granted him a privilege of fifteen years to make use of his invention.* To date from this time, gold was used to heighten the brilliancy of the paintings, and produced a very good effect.

* M. Brongniart (*Traité des Arts céramiques*, t. ii. p. 57) is mistaken in the date of this decree, which he gives as being 1509, instead of 1569, as we see in Passeri (p. 36), who quotes the whole text. This error in the date has led M. Brongniart to suppose that the discovery of Jacomo Lanfranco "n'était autre que ce lustre d'un jaune dorè qui enrichit de son éclat métallique les couleurs qu'il recouvre, lustre qu'on trouve, dit-il, dans les ouvrages de Giorgio à partir de 1511."

The metallic lustre which existed upon the Hispano-Arabic pottery, had disappeared, on the contrary, from the majolica at the period of the discovery of Lanfranco, which consisted, not in a metallic lustre, but in the real application of gold. The terms of the decree of 1569 leave no doubt in this respect; it runs thus: "Havendo noi veduto che Jacomo Lanfranco della nostra città di Pesaro habi egli trovato il modo dopo molte esperienze di mettere l'oro vero nelli vasi di terra cotta, et ornarli di lavoro d'oro, e quelli dopo cotti rimanere illesi, &c."

A custom generally adopted by the keramic artists during the reign of Guidobaldo, and which enables us to recognise the fayence of his period, consisted in writing at the back of the piece, in cursive characters of a blue colour, the subject represented by the painting; they sometimes added their names, with that of the town where they worked, and the date of the performance.

The subjects of the paintings were generally appropriate to the nature of the vessels they decorated (Fig. 108). We may instance two large coolers (*rinfrescatojo*). In the interior of the first is represented Venus rising from the sea, and upon the exterior, the Triumph of Bacchus; in the interior of the second, Phaeton and his followers swallowed in the waves of the ocean, and on the exterior, Moses striking the rock.

Conjointly with the keramic painters were modellers. Some vases of theirs have been preserved of so exquisite a form as to leave nothing to envy in the finest conceptions of antiquity. The Gallery of Florence possesses a great number. But why should these fine productions of the Italian art of the XVIth century be banished to the top of cabinets filled with ancient vases, and at so great a height that, although we are still able to judge of their fine forms, the paintings which decorate them are entirely lost to amateurs? It is well to be devoted to the worship of antiquity, but need this worship be exclusive? and could not the keepers of the Museum of Florence find a more fitting place for these productions of an art so strictly national, and which has contributed its share to the glory of Italy?

Fig. 108. Majolica ewer. Triton and a Nereid surrounded by marine divinities. Circ. 1550. Coll. Soltykoff.

The keramic modellers not only enriched their vases with masks, flowers, fruits, and figures in high relief, but they also executed detached figures in full relief and groups (Fig. 109). They succeeded particularly in modelling animals, especially birds, the colouring of which

is perfectly true to nature. These animals generally formed part of a table service.

A few words now concerning the Italian manufactories

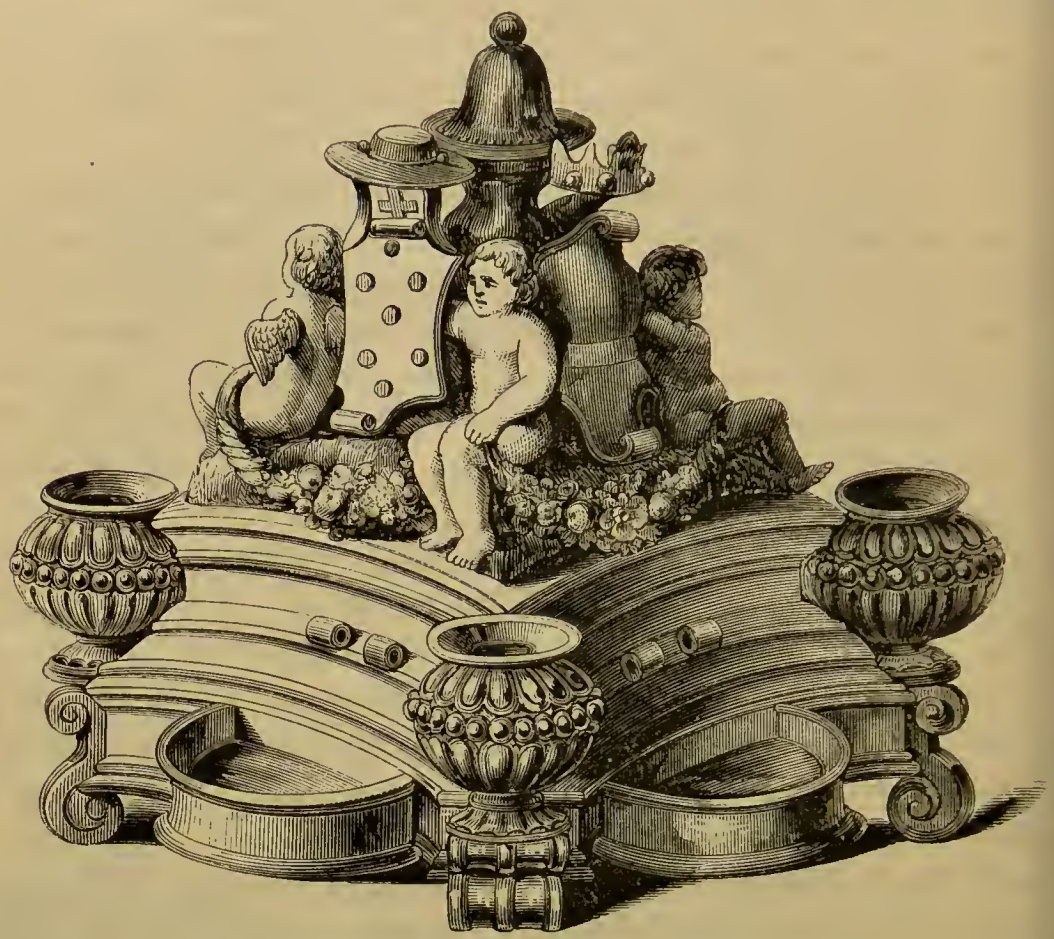


Fig. 109. Majolica inkstand of triangular form. XVIth century. In the possession of Colonel Palliser.

which, apparently, derived their origin from those of the Duchy of Urbino and of Tuscany, and on the attempts made in the XVIIIth century to restore the manufacture of majolica.

Manufacture at Naples in the XVIIth century.

Among these manufactories, the one which has yielded the finest productions was that established at Naples at the end of the XVIth century, or at the beginning of the XVIIth. The drawing of the paintings with which this ware is decorated, is generally correct and in good taste; but the colours are laid on more lightly than in the majolica of the Duchy of Urbino of the XVIth century, and the white ground of the enamel is scarcely concealed by the painting. It is however difficult, by mere description, to point out the difference between the two manufactures, though perceptible at first sight.

A manufactory at Venice in the XVIIth century has produced some specimens inferior in point of art, but curious as regards keramic execution. These are dishes, the rims of which are generally loaded with fruits in relief, and the centres decorated with slight and very inferior paintings. What renders this fayence singular is that it is very thin, very light, and so sonorous as to be commonly mistaken for sheets of copper enamelled and repoussé. The Museum of Sèvres possesses some fine specimens. This manufacture was of short duration.

Manufactures at Venice in the XVIIth century.

There existed at the beginning of the XVIIIth century at Sienna and Savona, manufactories of majolica, which, to judge by the specimens in the keramic collection of the Chamber of Arts at Berlin, produced very tolerable fayence. One of these is signed Agostino Ratti, of Savona, with the date of 1720; another bearing the date of 1727, is signed Terenzio Romano, at Siena. In 1754, there was at Urbania a manufactory which still furnished some inferior productions; Cardinal Luigi Merlini, governor of the province of Pesaro, endeavoured to attract to that city some of the workmen of Urbania; a keramist of the name of Bartolucci formed an establishment there which was closed shortly afterwards. In 1763, a new manufactory was established at Pesaro, at the suggestion of Passeri. His object was rather to imitate the Chinese porcelain than to revive the ancient Italian majolica. Many further attempts were afterwards made; it is easy to recognise the taste of the period. The new manufactory of Pesaro ceased to exist shortly afterwards, and their pieces may be considered as the last productions of the majolica which had formed, in the XVIth century, one of the brightest gems in the artistic crown of Italy.

List of manufacturers of majolica in the XVIIIth century.

§ III. FRENCH FINE FAYENCE OF THE SEVENTEENTH CENTURY, CALLED HENRY II. WARE.

This pottery is unique in its kind; its manufacture was not of gradual growth, but rose at once to a high degree of perfection, and was discontinued, at the end of a few years, without its being known, at the present day, by whom or where it was carried on.

The paste used for modelling this fayence is a true pipe-clay, fine and very white, so that it did not require, like the Italian fayence, to be concealed by a coating (*engobe*), or opaque enamel; the decorations are merely glazed with a very thin varnish, yellowish, but transparent.

Style of decoration of this fayence.

These decorations usually consist of interlaced ornaments tastefully arranged in a style resembling, to a certain degree, the Arabian. These consist of patterns formed of small bands of yellow ochre, with borders of light brown, or designs of a carnation red, formed in the ground itself of the paste. These ornaments, which are drawn with wonderful clearness and precision, are not traced with a brush, as might at first sight be supposed; they have been engraved in the paste by different processes unnecessary to be explained here,* and the colouring substances have been then incrusted in the incisures so as to leave no inequalities upon the surface of the vase. When this operation had been completed, the vase was baked and afterwards glazed. These elegant incrustations are not the only ornaments of this fayence; it is also enriched with alto-reliefs consisting of mouldings, corbels, masks, &c., which harmonise well with the arabesques of the ground; some pieces are even adorned with detached figures. The forms of the different vases are always pure in outline, and in the style of the Renaissance, so that this exquisite pottery may be justly compared to the repoussé, chased, and damascened metal-work of the XVIth century.

It is of French origin, and belongs to the XVIth century.

But, ignorant as we are with respect to the locality of this manufacture, we learn from existing specimens the period of its fabrication. The salamander † and other insignia of Francis I. are to be observed upon some of the pieces, but these are rare, and appear to be first essays; then, upon a large number of pieces,

* M. Brongniart, *Traité des Arts céramiques*, t. ii. p. 176, fully describes the process by which this ware is manufactured.

† The well-known device of Francis I., which he adopted with the motto, "Nutrisco et extinguo," I nourish and extinguish,—alluding to the fable that the Salamander fed upon fire and extinguished it. He caused a medal to be struck with the Salamander and the motto "Nudrisco il buono e spingo il reo." This emblem decorates all the palaces he built. Fontainebleau is covered with it, and Chambord contains nearly 4000. He gave the Salamander as arms to the city of Havre which he built. The letter F surmounted by a crown is also one of the marks of Francis I.

more beautiful and chaste in design than the first, we find the arms of France and the device or impresa * of Henry II.,† and now and then, the two D's interlaced of the Duchesse de Valentinois. Hence, we must conclude that the manufacture of this fayence begun at the end of the reign of Francis I., was continued under that of Henry II., and the circumstance that we find on it the emblems of these two princes alone, establish it entirely as of French origin. Some antiquaries have thought that this fayence was executed in Italy; but it differs too essentially from the Italian majolica, both in its paste and in the style of its decoration, to allow of our entertaining this opinion, which has no evidence in its support. Italy does not contain in her museums one piece of this fayence, nor are we aware that any specimen has been brought from that country; the greater number of the pieces, scattered in various collections, are derived from Touraine and La Vendée.

Fig. 110. Candlestick, fayence of Henry II. Coll. Sir A. de Rothschild.

Moreover, these pieces are very rare, scarcely forty can be

* *Impresa, Empresa,* Ital. from Fr. *entreprise,* anciently written emprise, because devices are used "pour exprimir des entreprises heroiques, pour declarer quelque grand dessein, quelque noble sentiment, quelque belle passion." Millin.

† The device of Henry II. was, in his youth, a full moon, with the motto, "Cum plena, est emula solis." He afterwards bore the crescent, with the motto, "Donec totum impleat orbem." Henry bore the crescent variously disposed, with the same motto, sometimes three interlaced, sometimes only one. It was generally accompanied by bows, quivers, and other attributes of Diana, with their joint initials, the D and H interlaced.

enumerated. The collection of M. Préaux, at Paris, which was the richest in this kind, contained six pieces, among which is a candlestick * of exquisite form (Fig. 110), and a pretty biberon; that of M. Sauvageot has five very fine pieces, especially a large saltcellar in the form of a triangular pedestal, with little genii at the corners supporting shields with the arms of France; the Museum of the Louvre, a cup and a saltcellar enriched with detached figures; the Musée Céramique of Sèvres, a cup upon a pedestal and cover. The finest specimens known are two large ewers belonging to Sir Anthony de Rothschild; one came from the Strawberry Hill collection, the other from that of M. de Monville; this last has been engraved in Willemin's work, and described by M. Pottier,† the first who gave some excellent suggestions upon this fayence, such as might be expected from so learned an observer.

§ IV. ENAMELLED EARTHENWARE OF BERNARD PALISSY.

At the period when Italian majolica had attained its highest degree of perfection, and enjoyed throughout Europe a justly deserved reputation, there arose in France a man whose persevering genius endowed his country with keramic productions of a totally new description, which owed nothing to foreign imitation.

Palissy and his works.

Bernard Palissy was born in the diocese of Agen, apparently about 1510. According to M. Cap,‡ the village of La Chapelle-Biron may boast of having given him birth. A geometrician, land-surveyor, painter of glass and images, Palissy was living in a distant part of Saintonge, and working at his different professions to support his numerous family, when, on seeing a fine cup of enamelled earthenware, he determined to apply himself to the discovery of a white enamel adapted to the glazing of pottery. Fifteen years of his life, embittered by physical and moral suffering, were employed in these researches. His curious memoirs describe to us all he endured, with a patience which stood

* Now in the collection of Sir Anthony de Rothschild.

† *Monuments Français inédits*, t. ii. p. 65, pl. 289.

‡ Historical Memoir of Palissy, prefixed to the new edition of his complete works. Paris, 1844.

every trial, before he succeeded in producing that magnificent enamelled pottery by which his name has been immortalised.

"Il y a vingt-cinq ans passez," he says, "qu'il me fut montré une coupe de terre, tournée et esmaillée d'une telle beauté, que dès lors i 'entray en dispute avec ma propre pensée en me rememorant plusieurs propos qu'aucuns m'avoient tenus en se mocquant de moi lorsque ie peindois les images. Or voyant que l'or commençoit à les délaisser au pays de mon habitation, et que la vitrerie n'avoit pas grande requeste, ie vay penser que si i'avois trouvé l'invention de faire des esmaux, que ie pourrois faire des vaisseaux de terre et autre chose de belle ordonnance, parceque Dieu m'avoit donné d'entendre quelque chose à la pourtraiture, et dès lors sans avoir esgard ie n'avois nulle connoissance des terres argileuses, ie me mis à chercher les esmaux, comme un homme qui taste en ténebres."*

He then relates all the fruitless attempts which he made, and leaves us impressed with the deepest admiration of that strength of character which enabled him to bear up under calumny, disappointments, and afflictions of every kind, rather than relinquish his object. Some extracts from his memoirs will suffice to show his unconquerable energy.

"Sur cela il me survint un autre malheur, lequel me donna grande fascherie, qui est, que le bois m'ayant failli, ie fus contraint brusler les estapes que soustenoyent les trailles de mon iardin, les quelles estant bruslées ie fus contraint brusler les tables et plancher de la maison, afin de faire fondre la seconde composition. I 'estois en une telle engoisse que ie ne saurois dire: car i 'estois tout tari et déseiché à cause du labeur et de la chaleur de fourneau; il y avoit plus d'un mois que ma chemise n'avoit sieché sur moy, encores que pour me consoler on se moquoit de moy, et mesme ceux qui me devoient secourir alloient crier par la ville qui ie faisois brusler le plancher: et par tel moyen l'on me faisoit perdre mon crédit, et m'estimoit-on estre fol."

It was not sufficient for Palissy to endure unheard-of fatigues, he had also to encounter capital accusations: "Les autres disoient que ie cherchois à faire de la fausse monnoye,

* *Œuvres de Bernard Palissy*, published by Faujas de Saint Fond, Paris, 1777, p. 14.

qui estait un mal qui me faisoit seicher sur les pieds, et m'en allois par les ruës tout baissé comme un homme honteux."

Notwithstanding all, he continues his experiments, and engages a journeyman potter to assist him in his labours; but soon he is obliged to give up the comfort afforded him by this man: "Quand nous eusmes travaillé l'espace de six mois, il fallut donner congé au potier, auquel par faute d'argent ie fus contraint de donner de mes vestements pour son salaire."

Nor were domestic trials wanting; his wife and his relations, who thought him mad, caused him, by their reproaches, annoyances of another sort. "En me retirant ainsi souillé et trempé, ie trouvois en ma chambre une seconde persecution

Fig. 111. "Rustic" dish with reptiles, shells, &c. Enamelled ware of B. Palissy. XVIth century. Coll. Soltykoff.

pire que la première, que me fait à présent esmerveiller que ie ne suis consumé de tristesse."

At last Palissy discovered the composition of various enamels which could be applied to pottery. He had yet much to accomplish in order to arrive at the baking of his vessels, and to protect them against all the accidents incidental to firing; but he gained new courage from this first success. "Quand je fus reposé un peu de temps, avec

regrets de ce que nul n'avoit pitié de moy, ie dis à mon âme: Qu'est-ce qui te triste, puisque tu as trouvé ce que tu cherchois? Travaille, à présent, et tu rendras honteux tes détracteurs."

He was right in persevering: after fifteen years of labour, toil, and suffering, he discovered a method "de faire divers esmaux entremeslez en manière de iaspe." This discovery enabled him to live for some years, and gave him the means of further extending his experiments.

Soon he arrived at the composition of his "pièces rustiques," a name he gave to those dishes ornamented with reptiles, shells, fishes, plants, and insects all executed in relief and perfectly true to nature, both in form and colour (Fig. 111.) As they were all moulded upon natural models,* these dishes were not designed for domestic uses, but to adorn the "dressoirs," which it was the custom among the rich to have filled with vessels of show, however splendid the service of the table might be besides. Palissy was now amply compensated for his troubles; these curious and remarkable works became the source of considerable emolument, and brought

Fig. 112. Dish with Arabesques in relief. Palissy. Marlborough House.

* M. Pottier has described to us, from a manuscript of the XVIth century, the processes Palissy must have employed for the execution of these singular casts. "On se servait, pour préparer le motif de la composition, d'un plat d'étain sur la surface duquel on collait, à l'aide de térébenthine de Venise, le lit de feuilles à nervures apparentes, de galets de rivière, de petrifications, qui constitue le fond ordinaire de ces compositions; sur ce champ, on disposait les *petits bestions*, comme dit le manuscrit, qui devaient en former le sujet principal; on fixait ces animaux, reptiles, poissons et insectes, au moyen de fils très fins, qu' on faisoit passer de l'autre côté du plat en pratiquant à ce dernier de petits trou avec une alène; enfin l'ensemble ayant

him into favour with the nobles, among whom he found some valuable friends and patrons.

Not satisfied with his first successes, he continued working at the improvement of his pottery, which, under his skilful hands, assumed varied and graceful forms, and was enriched by well-modelled masks and pleasing arabesques (Fig. 112). Soon he raised his art to the elevation of sculpture, and added subjects in bas-relief to the rich decorations of his dishes. He produced a multitude of small objects, writing-stands, saltcellars, and candlesticks, enriched with elegant reliefs, and sometimes with figures of charming originality.

Finding himself in a position to give full development to his art, to crown his labours, Palissy began to manufacture pieces of large dimensions, which he designated "rustiques figulines," and were intended for the decoration of gardens. It was then that, patronised by Catherine de' Medici and the Constable de Montmorency, he took the title of "Ouvrier de terre, inventeur des rustiques figulines du roi et de Monseigneur le duc de Montmorency, pair et connétable de France."

The protection of these influential persons was of great assistance to Palissy; he had embraced the Reformed religion, and, after the massacre of Vassy, in 1566, was carried to Bordeaux and incarcerated, in defiance of a safeguard given him by the Duke de Montpensier. His workshops were destroyed, and he would certainly have been put to death had it not been for the intervention of the Constable with the Queen-Mother, added to the authority of the King, who attached him to the jurisdiction of the parliament of Bordeaux, that his life might be preserved to the arts.

Catherine de' Medici continued her protection, and established him in the Tuileries, where workshops were constructed for his use. It was there that he executed his finest works.

He escaped the Massacre of St. Bartholomew; but in 1587, was again persecuted for his religious opinions. He was thrown into prison, where he died, it is believed, in 1589.

reçu tous ses perfectionnements par l'exécution d'une foule de détails variables suivant les circonstances, on coulait sur le tout une couche de plâtre fin, dont l'empreinte devait former le moule; ou dégageait ensuite les animaux du leur enveloppe de plâtre." *Monuments Français inédits*, t. ii. p. 69.

It appears from a book of expenses for the year 1570,* kept by the clerk of the works to the king, that from that period Palissy had associated with him in his labours, Nicolas and Mathurin Palissy, his sons or his nephews, who probably succeeded him. A dish, of common occurrence, representing Henry IV. surrounded by his family, must have been the work of his followers.

Followers of Palissy.

Attempts have been made to counterfeit the compositions of Palissy, but these imitations have always fallen far short of

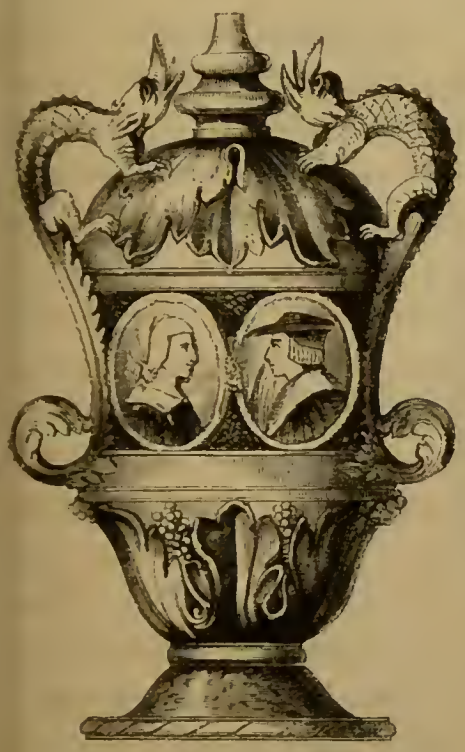


Fig. 113. Vase, enamelled pottery of Germany. Coll. Sauvageot.

Fig. 114. Drinking cup. Enamelled pottery of Germany. Coll. Palliser.

the originals, and may readily be distinguished by even an unpractised eye.

The fayence of Palissy is characterised by a particular style, and by several qualities peculiar to itself. We find on it no painting, strictly so called, that is flat painting, with shaded colours; its decorations consist always of reliefs coloured. The enamel is hard, and very brilliant, but little cracks may often be observed upon its surface. The colours employed are pure yellow, yellow ochre,

Character of his fayence.

* The discovery of this document is due to M. Champollion Figeac, who has published a letter upon the subject in the *Cabinet de l'amateur*, t. i. p. 276.

a fine indigo blue, a greyish blue, brown, violet, and yellowish white; for Palissy never succeeded in discovering the first object of his researches, the pure white of the Italian majolica; or, at least, he never was able to employ it in his work. The underneath of his dishes is never of an even tone, but much speckled with various coloured marble patterns, in shades of blue, yellow, and violet brown; this is doubtless that glazing of "Divers esmaux en tremeslez en manière de iaspe," the first result of his labours. M. Brongniart has remarked,* that the shells with which Palissy ornamented his rustic pieces are the fossil shells of the Paris basin; the fish are those of the Seine, the reptiles and plants of the environs of Paris; there is no foreign production to be met among them. He hence concludes, that a certain fayence, on which are represented no fossil shells, but only the plants and reptiles of the south of France, and the reverse of which is of a uniform chesnut brown, is an imitation of Palissy, but ancient date.

Fig. 115. Palissy vase enriched with masks and fruit in relief. Museum of the Louvre.

An enamelled fayence in relief manufactured in Germany (at Nuremberg) bears a great resemblance to the works of Palissy, but the form of the vases and the style of the subjects and

* Brongniart, work before quoted, t. ii. pp. 66, 69.

of the ornaments modelled upon this pottery, lead us easily to recognise its German origin. (Figs. 113, 114.) The paste of which it is made has neither the whiteness nor hardness of that of Palissy, nor have the enamels the same brilliancy.

Examples of Palissy's fayence are still very numerous. The Louvre (Fig. 115) and the Keramic Museum at Sèvres, exhibit many beautiful specimens; but the collection of M. Sauvageot decidedly contains the most complete series of his works. Nor have foreign collections failed to give them a place. The Japan Palace at Dresden and the Chamber of Arts at Berlin possess fine specimens.

Fig. 116. Palissy stove tile. Musée de Cluny.

Of his large pieces, the ornaments on fountains and gardens, those "rustiques figulines," so in fashion in his time, none whatever remain. The Museum of Sèvres alone possesses the capital of a column, considered to be a fragment of this kind of production.

To Palissy, also, are attributed those enamelled glazed tiles (*carreaux de revêtement*), enriched with paintings (Fig. 116), which decorated the chapel and several apartments of the Château of Ecouen, built from 1545 to 1557 by the Constable de Montmorency. These tiles were partly torn from the walls and the floors at the period that the château was given up for the school of the Legion of Honour. They are often met with in collections.

§ V. STONEWARE OF FLANDERS AND GERMANY.

The name of stoneware has been given, in the Keramic art, to a kind of pottery of dense paste, very hard, sonorous, opaque, more or less finely grained, and capable alike of dispensing with a glazing, or of receiving one.*

The stonewares made in the XVth, XVIth, and XVIIth centuries (Fig. 117) in Germany, Flanders, and Holland, and the countries bordering upon the Rhine, have a peculiar character, which makes them easily recognised; the forms, the style of ornamentation, the colours with which they are often enriched, sufficiently indicate their origin.

Fig. 117. Pilgrim's bottle. Blue and white stoneware. 1590. Coll. Bernal.

The manufacture of the most ancient, called "Jacobus Kannetje," is very generally attributed to the Countess of Holland, Jacqueline of Bavaria.† It is related that, during her captivity in the castle of Teylingen in Holland, she amused herself by throwing these stoneware vessels from her window into the Rhine, in order that they might at some future day become objects of antiquarian research. (Fig. 118.) Without attaching great importance to this tradition, which would carry back the manufacture of the stonewares to 1425, it is yet very credible that this kind

Antiquity of the manufacture.

* Brongniart has added the epithet *cérame* to the name *grès*, in order to distinguish the pottery from the quartz rock of that name. Work before quoted, t. ii. p. 92.

† Ibid., t. ii. p. 222.

of pottery may have been invented towards the middle of the XVth century; but it was not till a later period that it received, either by modelling, or by engraving and impression, or by the application of coloured enamels, the decorations which have rendered it a "poterie de luxe."

Fig 118. Jacobus Kannetje. XVth century. Coll. Marryat.

Character of the different kinds of stoneware.

The stonewares of the first half of the XVIth century, and those of the end of the XVth, are decorated with ornaments, armorial achievements, and sometimes with figures, either incised or in a very slight relief, effected by the impression of a seal, or stamped. Almost all have been rendered more or less brilliant by a lustre due to salt; the ground has sometimes received a coloured glazing over the entire surface. To this kind of stoneware apparently belongs a bottle, bearing the shield of France, now in the Museum of Sèvres, and of which M. Brongniart refers the manufacture to the reign of Charles VIII., from the form of the lilies, and that of the letters of the inscription, CHARLE ROY, engraved upon the side (*panse*) of the bottle.

Fig. 119. Apostles' Mug. German stoneware. XVIIth century. Coll. Marryat.

With respect to stonewares enriched with figures and ornaments modelled in relief, or embellished with polychromatic enamels upon relief (Fig. 119), they would appear to be all posterior to the first half of the XVIth century, and they are generally even of the XVIIth. The dates to be met with upon vases of stoneware of this kind, support this opinion. The most ancient date found

inscribed upon pieces in this style, in the Museum of Sèvres, is 1569; there are no dates much more ancient upon the vases in the Chamber of Arts at Berlin, nor upon those of the Keramic Museum of Dresden. M. J. d'Huyvetter, who had formed at Ghent a considerable collection of German and Flemish stonewares, possessed none that bore a date anterior to 1570 * (Fig. 120).

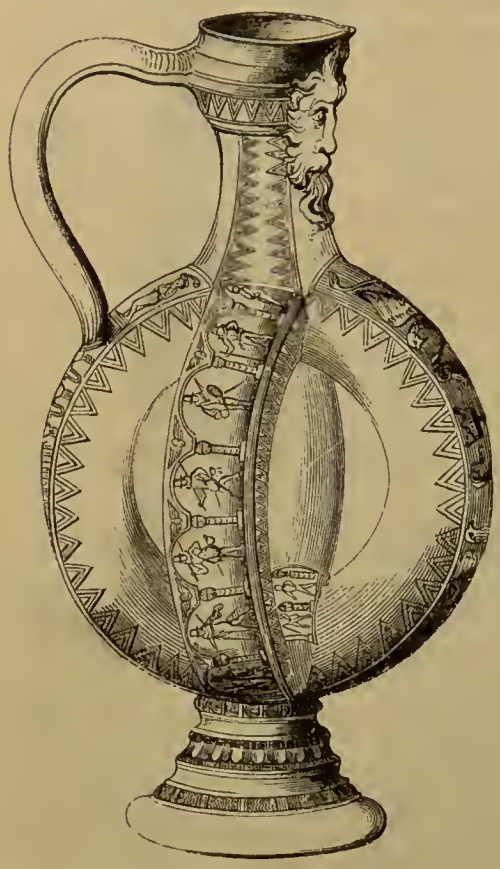


Fig. 120. Jug. Grès Flamand. XVIth century. Coll. Huyvetter.

Among the stonewares of artistic value must also be ranked the first productions of Böttcher, a celebrated German chemist, who first discovered the process of the manufacture of porcelain. These are true red, or reddish-brown stone-wares, having the hardness, the grain, and the complete opacity of this ware. The clay of which it is composed comes from Okrilla, near Meissen. The first specimens made by Böttcher, about 1704, are without glaze; but by cutting and polishing upon a lapidary's wheel, a brilliancy was given them which, at first sight, would cause them to be taken for marble, or for a very fine red lacquer. About 1708, Böttcher discovered the method of colouring this red stoneware with a black varnish or brown lacquer; the specimens are often of graceful form, and decorated with paintings and gildings not fixed by the fire. The process of making this red stoneware was lost in 1756, at the time of the Seven Years War.† (Fig. 121.)

* Brongniart, work before quoted, p. 226.

† Dr. Gustav Klemm. *Die Königlich Sächsische Porcellan-und Gefässe-Sammlung.* Dresden, S. 39—106. We avail ourselves of the opportunity offered by quoting a work of Dr. Klemm, conservator of the Keramic museum of Dresden, to express our gratitude for the gracious reception we experienced when we visited that museum, and for the documents with which he furnished us, upon the Keramic productions of Saxony.

§ VI. PORCELAIN.

The Portuguese first imported Chinese porcelain about 1503. It was a pottery very different, and very superior to all that the Keramic art had then produced in Europe. It was characterised by a fine, hard, compact, impermeable paste, and above all by translucidity, a quality which distinguished it essentially from all other pottery before known.*

Character of true porcelain.

Accordingly, from its first appearance, it was eagerly sought after by princes and nobles, and was, in the third quarter of the XVIth century, already so extensively used that its introduction was one of the causes which led to the decline of the majolica manufactories in Italy; † and it had by the beginning of the following century completely replaced this fine fayence upon the sumptuous dressoirs.

Long sea voyages were not at that time so easily performed

* The etymology of the name of *porcelain*, given to this class of pottery, has been the subject of very different opinions. There is only one point of agreement, that this word is not derived from the Chinese: in the Chinese language, porcelain is called *Tsee* or *Tsee-ki;* in Japan, *Jakimono-no.* It was generally supposed that the word porcelain came from *Porçolana,* a name which the Portuguese give to a cup, bowl, or any other earthen vessel. M. Brongniart (*Traité des arts céramiques,* t. ii. p. 474) thinks that this word is derived from the shell named porcelain, which, by its lustre and whiteness, resembles pottery of that name. It may be that this etymology is not yet the true one, for the word *porcelaine* existed in the French language long before the XVIth century, consequently anterior to the introduction of this pottery into Europe. Indeed, if we consult the old inventories of the personal property of kings and princes in the XIVth century, we shall then find the word porcelain applied to a precious substance cut into cups or vases, or used to form a back-ground for objects in chased and enamelled metal. These are some examples: "Une escuelle d'une pierre appelée pourcellaine," &c. (*Inventaire du duc d'Anjou, de* 1360, fol. 149); "Ung tableau de pourcelaine carré de plusieurs pièces et au milieu l'ymage de Notre Dame garnye d'argent," (*Inventaire de Charles* V., fol. 184); "Ung tableau carré de pourcelaine en d'un costé est l'ymage de Notre Dame en ung esmail d'azur," (*Même Inventaire,* fol. 220); "Une petite pierre de pourcelaine entaillée à six petiz ymages garnye d'or," (*Même Inventaire,* fol. 258); "Ung petit tableau de pourcelaine où est intaillé un crucifiement sans garnyson," (*Inventaire de Charles* VI. *de* 1399). This stone, called pourcelaine, must be a precious material; for the object to which it is attached almost always richly mounted in enamelled gold, with pearls and precious stones; it was doubtless a kind of agate, chalcedony perhaps, the character of which is cloudy, of a dead or milk white, or still more probably, the blue chalcedony, which partakes of a bluish tinge. All these stones have, like Chinese porcelain, a semi-translucidity; they assume the colour of it, and it is not surprising therefore, that the name of the stone called *pourcelaine,* should have been applied to the new pottery introduced by the Portuguese. This word will have afterwards been transformed into *porcelaine,* as *pourtraiture,* which we have just read in the extracts from the memoirs of Palissy, has changed itself into *portraiture.* We do not mean, however, to decide the question of etymology; but we submit these documents to the learned, who occupy themselves with such matters.

† Passeri, Work before quoted, p. 99.

as now; the Portuguese and Dutch alone frequented the Chinese seas, and porcelain maintained a high price. So that all the working Keramists of any talent or education, as well as the learned, initiated in chemical knowledge, sought with eagerness the means of imitating this beautiful pottery. Yet nearly one hundred years elapsed before they discovered the art of making, by a very complicated process, a porcelain entirely artificial, having none of the elements of the true natural porcelain of China, although, from its whiteness, its translucency, and its brilliant glaze, it had all the appearance of it, and possessed many of its properties. This new pottery, to which has been given the name of soft porcelain (*tendre*) was made for the first time at Saint Cloud, in 1695. The process employed will be noticed further when we come to speak of the manufacture of Sèvres, at which place it was brought to perfection; for the present, we have only been desirous of establishing the claims of France to this invention, and of giving to this pottery the place which belongs to it in chronological order.

Inventor of soft porcelain.

Fig. 121. Cameo, white on blue ground, after Flaxman. Wedgwood stoneware. XVIIIth century. Marlborough House.

This artificial porcelain, which was difficult of fabrication, could not serve as a substitute for the true Chinese porcelain.

The latter was composed of two principal elements derived from natural productions: the one argillaceous and infusible, called Kaolin, the earth which in Europe has preserved the same name; the other dry and fusible, called *petun-tsé*, which is felspar ground. The glaze or *couverte*, in Chinese *yen*, was composed of a peculiar felspar finely ground, to which was added a small quantity of *che-kao*, a kind of gypsum, and some other materials, but never either lead or tin.*

Composition of Chineso porcelain.

The original materials had been sent for from China, but arrived in a fine powder, in which state they could not be recognised; still it was therefore necessary to determine the materials of which this porcelain paste was composed, to discover in what proportions the mixture was effected, and, above all, to seek the localities of these different materials in Europe. The efforts of many learned men were directed towards the attainment of these ends.

Until the first year of the XVIIIth century these researches were all in vain. For Saxony was reserved the honour of making the first European porcelain: Johann Friedrich Böttcher was the author of this discovery.

Like our Palissy, Böttcher was exposed to rough obstacles before he obtained the object of his desires. If the former was supported under trials of every description by his firmness of character, dauntless courage, and unconquerable perseverance, the latter possessed, in the room of these higher qualities, an unalterable gaiety and light-heartedness, which enabled him to endure without complaint, and perhaps even without feeling them, the hardest labour and a long and rigorous captivity.

Böttcher and his labours.

Böttcher was born on the 4th of February, 1682, at Schlaiz in Voigtland,† and was placed, at an early age, with Zorn, an apothecary at Berlin. Already initiated by his father into the occult sciences, he occupied himself in his master's laboratory not so much with pharmacy as with works of alchemy. A rumour of this spread through Berlin, and fame, never slow to exaggerate either good or bad reputations, already bestowed on him the title of a maker of gold.

* Brongniart, Work before quoted, pp. 255, 429.
† Gustav Klemm, Work before quoted, p. 32.

His experiments in the transmutation of metals had given him, notwithstanding his youth, an importance in the eyes of Frederick William I. Perceiving that the interest shown by the king would degenerate into persecution, Böttcher secretly quitted Berlin and travelled for three years in Saxony. He did not yet, however, consider himself safe, and, in order to evade the pursuit of the King of Prussia, who wished to seize him to force from him his secret, he placed himself, in 1701, under the protection of Frederick Augustus I., elector of Saxony, King of Poland, who allowed him to settle at Dresden.

The elector of Saxony, in granting his protection to Böttcher, no doubt reckoned upon profiting on his own account by the talents of the maker of gold; he ordered Tschirnhaus to receive him into his laboratory and attentively to overlook his works.

Ehrenfried Walter de Tschirnhaus was a very distinguished scholar. After having travelled almost over all Europe, he went to Paris in 1682, and the Academy of Sciences, to whom he submitted several of his scientific works, admitted him as one of their members. On his return to Germany he applied himself to improvements in optics, and established three glass furnaces, from which were produced wonderful novelties in dioptrics and physics, and particularly a burning mirror which gained him a great reputation. Tschirnhaus, who was a very good chemist, had tried also to make porcelain; but supposing it was only a vitrification, his operations were so conducted as to issue in no other result than a milky glass, which had none of the qualities of true porcelain.

Tschirnhaus associated with Böttcher.

From the moment that Böttcher was, by order of Frederick Augustus, associated with this learned man, he became very uneasy at his position, beginning already to discover the futility of his researches although entered upon in all sincerity. But under so distinguished a person as Tschirnhaus, the labours of Böttcher were to take a more useful direction, and his knowledge of chemistry could not fail to conduct him to more real and tangible results. The earlier labours of Tschirnhaus led Böttcher to occupy himself with experiments for the discovery of porcelain, but instead of seeking it, like

his inspector, through the processes of vitrification, he had recourse to those of Keramics, and thus insured his success. Tschirnhaus, who was extensively acquainted with mineralogy, and who had well studied the clays of Saxony, had furnished Böttcher with a red clay from Okrilla, near Meissen, to make his crucibles. Böttcher recognised peculiar properties in this earth, and, after various attempts, he obtained, in 1704, a red pottery, dense, solid, very hard, and possessing therefore some of the qualities of porcelain, but wanting in translucidity, the most essential of all. This pottery was nothing more than a kind of stone ware, as we have before explained. It received, however, the name of red porcelain.

As men do not readily divest themselves of false impressions, it was judged that this invention of Böttcher might lead him to the much more important discovery of the tincture of gold. The elector, under pretext of withdrawing him from the curiosity of the public, and securing him the quiet needful for his work, had a laboratory erected for him, with a large number of furnaces, in the Château of Meissen. Everything was given him that he could wish for—a well-furnished table, horses, and carriages; but he never was trusted out of sight, or permitted to leave the château without being accompanied by an officer of the elector, who sat beside him in his carriage whenever he went to Dresden, so fearful were they of his making his escape, and carrying off with him his precious secrets.

In 1706, Charles XII. having invaded Saxony, the elector caused Böttcher and his workmen, accompanied by Tschirnhaus, to be conducted to the impregnable fortress of Königstein, where were always deposited the treasures of Saxony when threatened with invasion. A laboratory was there erected, and experiments continued for more than a year. Böttcher was subjected, in this fortress, to a supervision even more severe than at Meissen. His workmen could ill endure this rigorous seclusion; but nothing seemed to affect the inexhaustible gaiety of Böttcher, who, while steadily pursuing his work, composed verses, and endeavoured to amuse himself in the best manner he could.

In the month of September, 1707, the elector caused him to be taken back to Dresden. A new laboratory was erected

for him upon the beautiful terrace of Brühlsche watered by the Elbe. New experiments were there set on foot and followed with ardour, in the hope of attaining to the manufacture of true white porcelain. They employed for fusing the materials the burning mirror of Tschirnhaus, who shared in all these labours. The researches made were long and laborious. During all the attempts at firing, which lasted four or five days, Böttcher did not leave his furnace, and succeeded, by his gaiety and lively talk, in keeping up the spirits of his workmen, who thus endured, without a murmur, the greatest fatigue. The new experiments were interrupted by the death of Tschirnhaus, which took place in 1708.

Böttcher, now left to himself, soon resumed his work. A batch was made, the firing of which lasted five days; it succeeded perfectly; he had the joy of drawing from the kiln, in presence of Frederick Augustus, a tea-pot which was thrown immediately into cold water without experiencing any alteration.* This pottery was still only a red stone-ware, improved it is true, and able to resist a high temperature, but not real porcelain.

Discovery of a bed of kaolin at Aue.

The principal material was wanting; and chance brought to light that which science had failed to discover. John Schnorr, a rich iron-master, passing over the territory of Aue, near Schneeberg, remarked that the feet of his horse sank into a white, soft earth. This peculiarity struck Schnorr, to whose mind, as a skilful artisan, the idea suggested itself of reducing this earth to an impalpable powder, and selling it at Dresden, as a substitute for the hair-powder made of wheat flour at that time in general use. Böttcher's valet-de-chambre used it one day for powdering the wig of his master, who, observing its unusual weight, questioned his servant as to where this powder came from. He learned that it was earthy; he made trial of it; and recognised in it, to his great joy, the long sought kaolin, the substance which forms the principal basis of white porcelain.†

* Klemm, Work before quoted, p. 35. Brongniart considers this fact not as impossible, but as very doubtful.

† This fact has been sometimes given with the date 1711; but the first porcelain having been manufactured as early as 1709, and having been made, according to Dr. Klemm (p. 107), with the kaolin of Aue, there must be some error in the date of 1711. Besides no other kaolin is known with which Böttcher could have made his porcelain.

At length Böttcher succeeded, after some toil, in obtaining, in 1709, a white translucid porcelain having all the characters of the Chinese. The exportation of kaolin was then prohibited under the severest penalties; it was taken to the manufactory in sealed casks. The most minute precautions were employed to insure the secret of the manufacture; all those who were engaged in it were sworn to silence until death;* and whoever betrayed his oath was to be immured for life, as a state prisoner, in the fortress of Köningstein.

Manufacture of white porcelain.

On the 6th of June, 1701, the manufactory of porcelain was established in the château of Albrechtsberg, at Meissen, and Böttcher was named director.

Porcelain manufactory at Meissen.

The object of Böttcher's labours had been to obtain a pottery similar to that of China; and accordingly, at the outset, it was thought necessary to copy, as faithfully as possible, in form and colour, the beautiful porcelain of that country. The manufactory of Meissen succeeded in imitating it so exactly that it needs a practised eye to distinguish the porcelain made there in the Chinese style from the true Chinese porcelain. (Fig. 122.) The first productions are marked with an A and an R interlaced (Augustus Rex). This mark continued until 1730, after which period the manufactory of Meissen adopted as a mark the two swords crossed, at first placed in a triangle, but afterwards without any enclosure.

Fig. 122. Dresden teapot. Chinese style. Coll. Marryat.

Böttcher was not a good manager, and thus the Elector, notwithstanding the great outlay incurred, derived but little

* "Geheim bis ins grab."

profit from the first productions of his manufactory. It must also be confessed that Böttcher, having once attained his object in the discovery of porcelain, relaxed greatly in energy and perseverance; he lived magnificently, kept an open table, and led a dissipated life, which appears to have shortened his days. He died in 1719.

After Böttcher's death, J. G. Höroldt, a painter and modeller, was entrusted with the direction of the works. He improved the processes of fabrication, and particularly that of white porcelain. In 1731, the sculptor Kändler was appointed his coadjutor, and was specially charged to give a new impetus to works of art. As yet nothing had been made but vases; and Kändler was the first to have animals executed in white porcelain, of nearly natural size. Some specimens may be seen in the Keramic Museum of Sèvres. In 1732, the Elector desired statues of the twelve apostles to be modelled for the Japan Palace; that of St. Peter, 36 inches high, was the only one finished, and is now in the Keramic collection contained in that palace. This style was not persevered in, on account of the difficulties it presented. Yet Kändler undertook an equestrian statue of Augustus III. of colossal size; designed to be on a pedestal, round which were to be grouped some large allegorical figures; but the Seven Years' War arrested the progress of this gigantic monument, when the head only of the monarch was completed. The porcelain model at which Kändler had worked four years, exists in the Keramic Museum of Dresden. The directorship of this artist was especially marked by the creation of those graceful little figures, so brilliant in colouring and so true to nature, which show alike the costume and the taste of the period. These are, when well executed, highly prized by amateurs. The allegorical groups, representing the five senses, are among the best Kändler has executed.* This kind of manufacture † was carried on from 1730 to 1750. (Fig. 123.)

* Klemm, Work before quoted, p. 112.

† The manufacture of these statuettes in the taste of the period of Louis XIV. has been resumed of late years. When we visited the royal manufactory of Meissen, in September 1845, we remarked several of the workshops filled with a considerable number of workmen occupied in modelling, painting, and decorating these charming little figures. They are scattered in profusion over all Germany, France, and more

The works, which had mostly been interrupted by the Seven Years' War (1756 to 1763), were resumed at the peace with renewed activity. It was then that, under the influence of the writings of Winckelmann, the taste and studies of Germany were re-conducted to the masterpieces of antiquity. A school of design had been established at Meissen since 1754; and of this the celebrated painter Dietrich was appointed director. The modeller Luck, the painter Breicheisen of Vienna, and the sculptor François Acier, of Paris, continued the work undertaken by Dietrich.* In 1765 the reform effected by them was complete. The Keramic Museum of Dresden contained a collection of statuettes in biscuit of a very pure design, belonging to this school. The Grecian style reigned exclusively in the works of art of the manufactory of Meissen, at the end of the last century.

Fig. 123. Dresden candelabrum. Coll. Bernal.

Other manufactories in Germany.

The process of making the hard porcelain of China having once been introduced at Meissen, the princes and cities of Germany began to vie with each other in establishing manufactures of this much-sought porcelain. Two ways alone could lead to a knowledge of the process; the one long and difficult, that afforded by science and intense labour; the other more easy, but dishonourable, the corruption of the workmen of Meissen. This

particularly England, and the restoration of this manufacture, under the skilful direction of M. Kuhn, has been a source of considerable profit. M. Kuhn has not confined himself to the reproduction of models of the last century; he has made, in every respect, important improvements in the ancient processes of fabrication; and under his direction, the royal manufactory of Saxony has placed itself anew among the first in Europe.

* Klemm, work before quoted, p. 41.

latter mode was employed in preference. In 1720, notwithstanding all the watchfulness exercised over these workmen, Stölzel, foreman at Meissen, succeeded in making his way to Vienna, and founded in that city a manufactory of hard porcelain. A few years afterwards several others escaped, and set up manufactories in different places in Germany. No sooner was a workshop erected, than efforts were used to detach from it by every means of seduction such workmen as appeared acquainted with the process of this lucrative manufacture.* To such proceedings may be traced the origin of most of the hard porcelain manufactories established in Germany from 1720 to 1775.

Manufacture of soft porcelain in France.

In France, things went on differently. We have said that as early as 1695, there had been produced an artificial porcelain, which received the name of "porcelaine tendre."† The composition of the paste of this porcelain had required researches and combinations much more intricate than those which had led to the production of hard porcelain; the latter being obtained by the mixture of two substances ready furnished by nature. Kaolin and felspar were of little importance in the composition of soft porcelain; its transparency was given by salts, its plasticity by soap; its glaze was a crystal glass, composed of silex, alkali, and lead.‡

At St. Cloud, near Paris, was established the first manufactory of soft porcelain, by a Sieur Morin, who had spent five and twenty years in attempts to discover the secret of its composition. Martin Lister, who visited this manufacture in 1698, highly extols its productions.§ In 1718, this manufactory was under the direction of a Sieur Chicoineau. In 1735, the Brothers Dubois, his pupils, had established a manufactory at Chantilly; they proposed, in 1740,

* In M. Brongniart's Treatise may be seen the history of all the seductions to which the porcelain workmen were exposed, and the treachery of which they were guilty, t. ii. p. 491.

† The expression *tendre* has no reference to the hardness of the paste, but applies to the feeble resistance of this porcelain to the action of a high temperature, as compared with that offered by true porcelain, and also to the tenderness of the glaze, which can be scratched by steel (Brongniart, t. ii. p. 444). True porcelain has in contradistinction obtained the epithet of *hard*.

‡ It does not enter into our plan to enlarge upon the processes of manufacture on this point the learned *Traité des arts céramiques* of Brongniart may be consulted, t. ii. p. 458, *et seq.*

§ Martin Lister. A journey to Paris in the year 1698. London, 1699, p. 138.

to M. Orry de Fulvy, comptroller of the finances, to reveal to him the secret of the composition of porcelain; but their attempts not realising the hopes they held out, M. de Fulvy broke off his connexion with them. They were succeeded by Gravant, an active and intelligent man; he made soft porcelain, and sold the secret to M. Orry de Fulvy, who, in 1745, formed a company for the sale of this porcelain (in the name of Charles Adam), and obtained for it a privilege of thirty years. This manufactory was established at Vincennes. In 1753, Louis XV. took a third share in the undertaking, and gave it the title of a Royal Manufactory. In 1754, the manufacture had attained a high degree of perfection, and the buildings at Vincennes, where it was carried on, being found too confined, it was thence transferred to Sèvres, to a large edifice constructed for the purpose. In 1760, Louis XV. reimbursed the company, and became sole proprietor of the manufactory, which he endowed with nearly 100,000 livres. The manufacture of soft porcelain has been discontinued at Sèvres since 1804; the pieces which date from the time of Louis XV. and Louis XVI. are much sought after by amateurs (Fig. 124).

Manufactory at Sèvres.

Still, while during sixty years hard porcelain had been made in Saxony, France had only been able to produce this artificial porcelain, which could never be considered the same as that of China; the processes for the fabrication of which, although constantly an object of pursuit, remained as yet undiscovered. The government, desirous to relieve the country from the large importations of German porcelain, had made an agreement, in 1761, with a Sieur Peter Anthony Hanüng, of Strasburg, the director of a porcelain manufactory in the Palatinate, for the

Fig. 124. Sèvres vase, bleu de roi. Coll. Bernal.

acquisition of his processes; but these it was found impossible to employ, from the want of the principal materials, kaolin and felspar, which had not been discovered in France.

Discovery of beds of kaolin in France.

In 1765, Guettard gave information of a bed of kaolin and felspar, near Alençon. The first porcelain he made with these materials had a gray tinge; it would not produce a porcelain similar to the Chinese, the aim of all their researches. Chance soon afterwards led to the discovery of a bed of kaolin much finer and more abundant, and by which France was at length supplied with a very fine, hard porcelain. Madame Darnet, the wife of a surgeon at Saint-Yrieix, having noticed a white earth in a ravine near the town, imagined it might be used in washing, as a substitute for soap. Her husband, who had probably heard of the researches making in quest of porcelain earth, took this with him to Bordeaux, and showed it to an apothecary of that city. The latter sent specimens to the chemist Macquer, who immediately recognised it as kaolin. After having ascertained, in 1768, the importance of the bed at Saint-Yrieix, and after some preliminary experiments, Macquer introduced at Sèvres the manufacture of hard porcelain, which was soon in full operation.

Manufacture of hard porcelain at Sèvres.

Madame Darnet, whose discovery, accidental, it is true, but most beneficial to France, had thus freed her country from an onerous tribute to Germany, and been instrumental in raising it to the first rank in the manufacture of this beautiful pottery, was still living unknown and in poverty in the year 1825. At that period, she applied to M. Brongniart for help, to enable her to return on foot to Saint-Yrieix. Her misfortunes had only to be made known to the learned director of Sèvres, to secure their prompt relief. She obtained immediate assistance, and M. Brongniart having acquainted the King with the melancholy position of Madame Darnet, Louis XVIII. paid the debt of France, by granting her a pension from the civil list.

The direction of the manufactory of Sèvres passed successively through the hands of Boileau and Parent, and then into those of Régnier, who, in 1793, was deprived of his office, and imprisoned. Yet the works were not interrupted, even during the Reign of Terror; commissioners, members of

the Convention, were placed at the head of the establishment; three directors succeeded them under the government of the Directory; at last in 1800, M. Brongniart was named by the first consul sole director of the manufactory.

The productions of the manufactory of Sèvres are stamped naturally with the taste of the period when they were made; but whatever may be the verdict of individual opinion upon each of the different styles that in turn has been in fashion from its first establishment until now, it must be admitted that the forms of the vases have been always fine and pure, the ornamentation graceful, and the colouring exquisitely beautiful and harmonious (Fig. 125).

Fig. 125. Sèvres vase, bleu de roi. Coll. Berna

Since 1753, very distinguished artists, painters, or modellers, have been attached to the establishment. The artistic direction was first entrusted to Falconnet and Bachelier, and afterwards successively to Boizot, Lagrénée, and Corneille Van Spaendonck. Among the artists who distinguished themselves in the reigns of Louis XV. and Louis XVI., may be mentioned Mérault, Bouillat, Parpette, Micaud, Pithou the younger, Niquet and Sioux, for flower-painting; Armand and Castel, who excelled in painting birds; Chulot and Laroche, who were famous for arabesques; Rosset and Evans, for landscapes; Dodin, Caton, Asselin, and Pithou the elder, for figures, portraits, and subjects.

Falconnet supplied the models of many charming statuettes, one of the most celebrated among which is his "Baigneuse."

From 1753 to 1769, the royal manufactory made only soft porcelain; from that period until 1804, the two kinds of

porcelain were made conjointly. Since 1804, hard porcelain alone is made.

From 1753 to 1792, the mark of the royal manufactory consisted of two L's opposed and interlaced, traced in blue at the back of the pieces. A letter, placed in the centre of the two L's, shows the year in which the piece was decorated. The year 1753 is indicated by an A, 1754 by a B, and so on, until 1776, shown by a Z; 1777 is designated by a double A, and this mode of marking with two letters is continued in alphabetical order until 1793, which is marked with two R's. The monogram, or sign, placed below the two L's interlaced, is that of the painter or decorator. This information will be sufficient to enable amateurs to know the date of manufacture of the pieces of old Sèvres; besides, they will find very extensive details, and the marks of the Sèvres artists, in the "Description du musée Céramique" of Messrs. Brongniart and Riocreux.

CHAPTER IX.

GLASS.

§. I. ANCIENT GLASS.

The art of glass-making dates from the most remote antiquity. According to Pliny, some Phœnician merchants, having disembarked near the mouth of the river Belus, brought on shore from their vessel some blocks of natron, to support the kettle in which they cooked their food; the action of the fire, combining the natron with the sand of the river, the result was the production of glass.* Bernard Palissy, in his "Traité des eaux et fontaines," relates, from Josephus, another fable, which is equally incredible: "Aucuns disent que les enfans d'Israël ayant mis le feu en quelque bois, le feu fut si grand qu'il eschauffa le nitre avec le sable, iusques à le faire couler et distiller de long des montaignes, et que deshors en chercha l'invention de faire artificiellement ce qui avoit esté fait par accident pour faire le verre." †

That to some fortuitous liquefaction we owe the first suggestions for the manufacture of glass, is indeed very possible; but it is still more certain that human industry must have long been employed before it arrived at the production of a substance which is capable of being manipulated on the marble,‡ of being expanded by the blow-pipe, and of being coloured by metallic oxides. From the moment that these processes had been discovered, the assistance of art

* "Quibus accensis, permixta arena littoris, translucentes novi liquoris fluxisse rivos, et hanc fuisse originem vitri." Pliny, l, xxvi. cap. xxv.

† Bernard Palissy, Paris, 1777, p. 271.

‡ Technically called marver, a slab of cast-iron, with a polished surface, placed upon a wooden stand. Upon this slab, the lump of glass is rolled to give it a regular exterior, so that the result of expansion by blowing may be uniform in thickness of metal. Curiosities of Glass Making. A. Pellatt.

was called in, to give elegant forms to the material, or to decorate it with paintings and chasings, and embellish it with ornaments of every description.

Our enquiries respecting the agency of art in the manufacture of glass will apply only to the fabrication and the ornamentation of glass vessels.

Glass-making in Egypt and Phœnicia.

The first manufacturers of glass were in Egypt and Phœnicia. Pliny praises the skill of the glass-makers of Sidon; Herodotus and Theophrastus have made us acquainted with the wonderful productions of the glass-houses of Tyre.

M. Boudet, a member of the Egyptian Commission,* resting on the authority of Strabo, maintains, with M. de Pauw,† that Egypt is the cradle of the art of glass-making; that the manufactories of the Phœnicians were established upon the model of those of Thebes and Memphis; and lastly, that the discovery of glass is to be attributed to the priests of Vulcan, the first chemists of antiquity.

If, in favour of the Phœnicians, we have the testimony of several authors to their skill in making glass, the Egyptians have better evidence still. The excavations made in Egypt, and principally those of the temple of Karnac at Thebes, in bringing to light the produce of their manufactures, demonstrate that they carried to great perfection the art of vitrification.

The Phœnicians and the Egyptians introduced their art into Sicily, the islands of the Archipelago, and Etruria, and it appears certain that manufactories of glass vessels were established in these countries at a very remote period.

According to some authors, glass was not imported into Rome until the time of Sylla, after the conquests of the republic in Asia, and when the art of glass-making had already made considerable progress. It immediately rose in high estimation. Augustus, having subdued Egypt, required that glass should form part of the tribute of the conquered. This tribute, far from being a burden upon the Egyptians, proved a source of great advantage to them.

* *Notice sur l'art de la verrerie né en Egypte;* Description de l'Egypt, t. ii. 3 livre, 2 section.

† *Recherches philosophiques,* p. 304.

Glass became so much in fashion, that considerable quantities were imported to Rome. In the reign of Tiberius, manufactories of glass were established in the neighbourhood of the Great City, and this competition naturally awakened the emulation of the glass-makers.

The Romans soon discovered the method of staining glass, of blowing it, of working it on a lathe, and of engraving it. They knew how to make cups of glass as pure as crystal, and Pliny informs us that Nero paid for two of small size, 6000 sestertia. The taste for vessels of glass was carried to such an extent, as to cause them to be preferred for use to vessels of gold and silver.*

Glass-making of the Romans.

Nero, Adrian, and his successors, down to Gallienus, all patronised the art of glass-making.† This last took a dislike to glass, and would drink only out of vessels of gold, but Trebellius Pollio, who makes us acquainted with this fact, says further, that the manufactories of glass, which under this emperor began to decline, were restored under Tacitus, who granted to the glass-makers his especial patronage.‡

The early Christians were acquainted with the art of decorating vessels of glass, and large quantities have been found in the catacombs, and in some of the cemeteries of Rome, enriched with various ornaments. Buonarotti has published a number that are very curious.§ The decoration of many of these vases was obtained by a process which D'Agincourt thus describes: "Sur une feuille d'or appliquée au fond d'un verre à boire, ou traçait des lettres, ou bien on dessinait des figures au moyen d'une pointe très fine; puis, afin de mieux conserver le travail, on appliquait par-dessus une couverte de verre, de manière que, soudés au feu l'un contre l'autre, ces verres laissaient voir les figures et les inscriptions." ‖

There remains a considerable number of vases of the Roman period in collections. The celebrated Portland vase (Fig. 126), in the British Museum, so lately unfortunately broken by a madman, is alone sufficient to show the degree

* "Vitri usus ad potandum pepulit auri argentique metalla." Pliny. *Hist. nat.*, l. xxxvi. c. xxvi.

† Levieil, *Art de la peinture sur verre*, 1771, in fol., p. 8.

‡ Fl. Vopiscus, ap. *Hist. roman. script. lat.*, 1621, t. ii. p. 461.

§ *Osservazioni sopra alcuni vasi de vitro.* Firenze, 1716.

‖ *Hist. de l'art*, t. v. pl. xii., and t. ii. p. 27.

of perfection to which the art of glass-making was carried by the ancients. On this vase, composed of two layers of glass, are represented white figures, sculptured in relief, upon a blue

Fig. 126. Fig. 127. Fig. 128. Fig. 129.
126. Portland Vase, British Museum. 127. Alexandrian vase, Museo Borbonico, Naples. 128. Pompeii vase, M. Borbonico, Naples. Fig. 129. Auldjo vase, Coll. Auldjo.

ground, so perfect an imitation of an onyx cameo that, for some time, this magnificent specimen of the art of glass-making, was taken for a natural production. (Figs. 127, 128, 129.)

Specimens of an earlier date, from the manufactories of Egypt and Phœnicia, are of more rare occurrence.

§ II. GLASS OF THE GREEKS OF THE LOWER EMPIRE.

When Constantine removed the seat of the empire to Byzantium, he was not satisfied with carrying off the masterpieces of art from Rome, Greece, and Asia, to adorn his new capital; but he also summoned thither the most celebrated artists of every description. Manufactories of all that luxury could desire, soon rose in the neighbourhood of this opulent city.

A severe shock was, of necessity, given to the industrial arts by the invasion of the barbarians, the pillage and burning that Rome had several times to undergo, and the miseries which overwhelmed Italy for many centuries. The art of

glass-making appears to have suffered more than any other, and if some manufactories continued to exist in Italy, their productions must have been confined to common glass, intended only for domestic purposes. Ornamental pieces, or those vases of coloured glass, in layers of different shades, enriched with carvings and skilful decorations, which, for many centuries, had been the pride and admiration of the Romans, these Italy had ceased to produce. The decorative artists in glass had found refuge in the empire of the East, and the Greeks alone were, for a long period, in possession of this manufacture.

Glass-making of the Greeks of the Lower Empire, according to Theophilus.

Of this we find evidence in the treatise of the Monk Theophilus, upon the industrial arts of his time.* The second book of this treatise is entirely devoted to an explanation of the processes of the manufacture of glass, of the making and decoration of the vessels that can be made of it, as well as of the painting of glass windows. In the nine first chapters, he treats of the construction of the different furnaces required in this manufacture, teaches how to make window-glass and common glass vessels, and gives some idea of the colour imparted to glass by a more or less prolonged firing; without assigning to one nation, more than another, the use of these processes, which he seems to consider as the common property of the glass manufacturers of all countries. But when he comes to speak of ornamental vases, of those vases of glass embellished with incrustations of gold, with paintings in coloured enamel, and with ornaments in glass filagree, it is to the Greeks alone that he attributes the manufacture.

In his 13th and 14th Chapters, Theophilus explains, that the Greeks made several kinds of vessels with different sorts of glass. He speaks first of cups made in opaque glass, the colour of sapphire,† which was capable of three kinds of

* Theophilus, *Diversarum artium schedula.* We have before said (p. 48.), that Theophilus must have written his treatise in the XIIth century.

† He says, book ii. ch. xiii: "Græci vero faciunt ex eisdem saphireis lapidibus pretiosos scyphos ad potandum." In the preceding chapter entitled, "De diversis vitri coloribus" he points out the nature of these *glass stones*, or rather cakes of sapphire-coloured enamel: "Inveniuntur in antiquis ædificiis Paganorum in musivo opere diversa genera vitri; videlicet album, nigrum, viride, croceum,

decoration. The first consisted of cutting out in rather thick gold leaf, human figures, animals, or flowers, which were fixed upon the cup with water; very clear glass, like crystal, fusible at a low temperature, was then, after having been ground with water on a porphyry stone, laid on very thinly over the gold leaf with a pencil. When the preparation was dry, it was placed in the furnace used for firing the painted glass of windows. The wood was withdrawn from the furnace as soon as the heat had sufficiently penetrated the cup to produce a slight tinge of red.*

This kind of decoration differed from that which D'Agincourt describes as practised by the early Christians. These latter, as we have seen, after having applied a leaf of gold upon the glass, drew upon it with a point the subject intended to be represented, and then covered over the gold with a leaf of glass, to which D'Agincourt has incorrectly given the name of glaze (*couverte*), which was soldered to the vase by the action of the blowpipe.

Heraclius in his poem "De coloribus et artibus Romanorum," † of which we have already spoken, has described the process of the ancients nearly in the same manner as D'Agincourt. He does not give the process as a system of ornamentation practised by the glass-makers of his time; he speaks of it as would an antiquary, who after having studied from the pieces which had fallen in his way, a process in use among the glass-makers of antiquity, next endeavoured to recover the secret, the knowledge of which had been lost, and at length succeeded in so doing, after patient investigation.

"I found gold-leaf carefully inclosed between the double

saphireum, rubicundum, purpureum, et non est perspicax, sed densum in modum marmoris, et sunt quasi lapilli quadri, ex quibus fiunt electra in auro, argento et cupro, de quibus in suo loco sufficienter dicemus." Therefore the glass cups were made with opaque, vitreous compositions, similar to that of incrusted enamels (*electra*) see above, page 105.

* "Deinde accipiunt vitrum clarissimum, velut crystallum, quod ipsi componunt, quodque mox, ut senserit calorem ignis, solvitur, et terunt diligenter super lapidem porphiriticum cum aqua, ponentes cum pinecllo tenuissime super petulam per omnia, et cum siccatum fuerit, mittunt in furnum, in quo fenestræ vitrum pictum coquitur, de quo postea dicemus, supponentes ignem et ligna faginea in fumo omnino siccata. Cumque viderint flammam scyphum tamdiu pertransire donec modicum ruborem trahat, statim ejicientes ligna, obstruunt furnum, donec per se pigescat; et aurum nunquam separabitur." Cap. xiii.

† Bibl. roy., MS. latin, no. 6741.

glass. When I had often knowingly looked at it, being more and more troubled about it, I obtained some phials shining with clear glass, which I anointed with the fatness of gum with a paint brush. Having done this, I began to lay leaf-gold upon them, and when they were dry I engraved birds, and men, and lions upon them, as I thought proper. Having done this, I placed over them glass made thin with fire by skilful blowing. After they had felt the heat thoroughly, the thinned glass adhered properly to the phials."* Heraclius says nothing of the Greek process.

The second manner indicated by Theophilus as having been introduced by the Greeks, for the decoration of cups of opaque sapphire glass, consisted in enriching them with subjects or ornaments composed of gold or silver ground in a mill, tempered with water, and laid on with a brush. The metallic preparation was covered over with the thin layer of clear glass already mentioned.† According to the third method, the paintings were expressed by enamels of the same nature as those used in incrustations. The different enamel colours were ground separately upon the porphyry stone, laid on with a brush, and fixed upon the glass by

* Mrs. Merrifield's translation.

"Inveni petulas inter vitrum duplicatum
Inclusas caute. Cum solers sæpius illud
Visu lustrassem, super hoc magis et magis ipse
Commotus, quasdam claro vitro renitentes
Quæsivi fialas mihi, quas pinguedine gummi
Unxi pinecllo. Quo facto, imponere cæpi
Ex auro petulas super illas, utque fuere
Siccatæ, volueres, homines pariterque leones
Inscripsi, ut sensi: quo facto, desuper ipsas
Ornavi vitrum docto flatu tenuatum
Ignis; sed postquam pariter sensere calorem,
Se vitrum fialis tenuatum junxit honeste."

We have given above (p. 276) the beginning of the chapter of the poem of Heraclius, from which we have extracted the above verses: "Romani fialas auro caute variatas," &c. It would seem, from the writings of Heraclius, that he had no knowledge of the processes employed by the Greeks. If these processes were not practised in Europe in the time of Theophilus, they must at least have been known by all persons who occupied themselves with the industrial arts, and especially those who, like Heraclius, made researches upon the art of glass-making. Does it not result from this that Heraclius must have lived anterior to Theophilus? *See* what we have said, p. 277, upon the processes given by Heraclius for engraving glass.

† "Accipientes aurum in molendino molitum, cujus usus est in libris, temperant aqua, et argentum similiter, facientes indo circulos et in eis . . . et liniunt hæc vitro lucidissimo, de quo supra diximus." L. ii. cap. xiv.

vitrification, in the furnace used for window glass, in the same manner as the cup before described.*

The Greeks also made cups and flasks of a bright transparent glass, of a sapphire and purple colour, which they enriched with a network of white or coloured glass filagree, to which they added glass handles of the colour of the network.†

Thus the Greeks of the Lower Empire, from what Theophilus says, had not only preserved all the fine processes belonging to the glass-making of antiquity, but they also had discovered others consisting of the use of painting in vitreous colours, an ingenious method which the ancients do not appear to have practised.

Glass-making of the Middle Ages.

Since Theophilus, whose treatise passes in review the industrial arts of all nations, attributes to the Greeks alone the production of vases of ornamental glass, we must infer, that no other nation in the XIIth century pursued this branch of artistic industry. Perhaps an exception might be made in favour of the French; for Theophilus, who, in his preface, had extolled their skill in window painting, again mentions this nation in the twelfth chapter of his second book, of which we have already quoted a portion of the text. After noticing those little cubes of opaque glass, coloured with different tints, which are found in the mosaic work of ancient edifices, he adds, "Divers small vases are also found of the same colours,‡ which the French, most intelligent in this work, collect." We must, however, admit that if the passage in Theophilus may lead us to suppose that the manufacture of coloured glass vases was carried on in France in the XIIth century, this manufacture can have been but of short duration, or must have been confined to the simple

* "Accipientes vitrum album et rubicundum ac viride, quorum usus est in electris terunt super lapidem porphiriticum unumquodque per se diligenter eum aqua, et inde pingunt floscules et nodos, aliaque minuta . . . ; et hoc mediocriter spissum coquentes in furno ordine quo supra." Lib. ii. cap. xiv.

† "Faciunt quoque scyphos ex purpura sive levi saphiro, et fialas mediocriter extento collo circumdantes filis ex albo vitro factis, ex eodem ansas imponentes. Ex aliis etiam coloribus variant diversa opera sua pro libitu suo." Lib. ii. cap. xiv.

‡ The chapter is entitled: "De diversis vitri coloribus," and we have seen above that by these words, *colores vitri*, Theophilus means the enamels on coloured glasses used in incrustations, those that the Greeks used in their cups.

coloration of glass, without the addition of either painting or enamel, or of any artistic workmanship; for, when in the inventories of the kings and princes of the XIVth century, we happen to meet with the description of a piece of decorated glass, it is always accompanied by some expression which indicates its oriental origin.

Thus we read in the inventory of the Duke of Anjou in 1360:—"Deux flascons de voirre ouvrés d'azur de l'ouvrage de Damas, dont les anses et le col sont de mesme."* In the inventory of Charles V., dated 1379:—"Trois potz de voirre ouvré par dehors à ymages à la façon de Damas.—Ung bassin plat de voirre paint à la façon de Damas." † We have only found in it one specimen of glass mentioned as European, a white glass without either ornament or painting in enamel:—"Ung gobelet et une aiguière de voirre blant de Flandres garny d'argent." ‡ We have before observed that Damascus had been one of the most important industrial cities of the Greek empire, and that under the Arab dominion, it had still retained its splendid manufactures and continued to supply Europe with their productions.

There is therefore ground for supposing that in Western Europe before the XVth century, glass (although employed with such brillant effect for windows) had not appeared worthy of being fashioned into decorative vases, perhaps on account of its fragility or the cheapness of the material.

§ III. VENETIAN GLASS.

Glass-making of the Venetians, from the XIIIth to the end of the XIVth century.

If the Eastern Empire appears until towards the end of the XIVth century to have been exclusively in possession of the manufacture of ornamental glass vessels, a powerful rival, had nevertheless arisen who was soon about to snatch from it this branch of artistic industry.

In the course of the XIth and XIIth centuries, the city of Venice had become the most commercial of the civilised world. She had above all established her power by means of navigation and trading to the East. In the XIIIth century

* MS. Bibl. roy., *suppl. Franc.*, no. 1278, fol. 27.
† MS. Bibl. roy., no. 8356, fols. 184, 198, 211. ‡ Ibid. fol. 189.

the profits she derived by transporting the commodities of other nations no longer satisfied her ambition; to commerce she was desirous of uniting manufactures. Accordingly, many new ones were set on foot as well at Venice itself as in the states of the Republic on Terra Firma, and those which already existed received a lively impetus, and were very considerably developed.*

The glass manufactories, to believe the Venetian authors, were almost contemporaneous with the founding of the city itself.† A great event which marked the beginning of the XIIth century was the means of increasing their prosperity, and contributed to the introduction of art into a manufacture until then purely industrial. The Venetian republic had, in short, participated in the taking of Constantinople by the Latins (1204), and imbued as she was with the spirit of commerce, she sought to derive every possible advantage from this victory, in favour of her dawning manufactures. The glass-houses of the Eastern Empire were inspected by agents of the republic, and Greek workmen were allured to Venice.‡ It is certain, that to date from the end of the XIIIth century, an uninterrupted series may be produced of acts of the Venetian government, which prove both the importance of the glass manufactories from that remote period, and the special interest ever taken by the state in the cultivation of the art, which, to use the expression of a Venetian writer, it guarded as the apple of its eye.§ It in this displayed great sagacity, since for many centuries the four quarters of the world were inundated by the various productions of the glass manufactures of Venice; and the sums of money procured to the republic by this branch of industry alone would utterly defy calculation.

From the end of the XIIIth century, the manufactories of glass had so multiplied in the interior of Venice, that the city was incessantly exposed to fires. In 1287, a decree of

* Carlo Marino, *Storia civile e politica del commercio de' Veneziani.* Venezia, 1788.

† Ibid. t. i. l. ii. p. 213, t. v. l. ii. p. 258. Filiasi, *Saggio sul antico comm. e sulle arti de' Veneziani,* t. vi. p. 147.

‡ "La perfezione della vitraria col alcuni diramazioni o modificazioni del cristallo e del vetro possono averle tolte da' Greci." Carlo Marino, t. iii. p. 222.

§ "La vitraria venne in ogni tempo considerata dal governo qual pupilla degli, occhi suoi." t. v. l. ii. p. 258.

the Great Council * prohibited any manufactory of glass to be established within the city, unless by the proprietor of the house in which it was to be carried on. This exception in favour of the proprietors perpetuating the inconveniences which the government had endeavoured to guard against, a new decree was issued on the 8th October, 1291, by which all the manufactories of glass still existing in the interior of Venice were ordered to be demolished and removed out of the city.†

It was then that choice was made of the island of Murano, which is only separated from Venice by a canal of small extent, for establishing in it the manufactories of glass. In a few years, the whole island was covered with glass-houses of various descriptions.

But a new decree of the 11th of August, 1592, modified the rigour of the previous regulations in favour of the manufactories of small glass-ware (fabbriche di conterie) for the making of beads, false stones, and glass jewels.‡ These were now allowed to be set up in the very interior of Venice, with the sole condition of their being insulated at least five paces from any habitation.

This favour granted to glass jewellery proceeded from the immense trade in it carried on by Venice at that period, and the government was careful in no way to check a branch of industry which extended its relations in Africa and Asia, and consequently favoured the extension of its navy, upon which depended the increase of the power of the republic.

The Venetian glassmakers were soon engaged almost exclusively in this branch of its manufacture, a circumstance which may be accounted for as follows :—

About 1250, Venetian Matteo Polo and his brother Nicolò, father of the celebrated Marco Polo, were attracted by commercial views to Constantinople. In 1256 they both visited the Khan of Tartary, who inhabited the banks of the Volga. War having obliged them to leave the

* Carlo Marino, *Storia Civile*, t. v. p. 260.

† Bussolin, *Guida alle fabbriche di Murano*. Venezia, 1842, p. 3.

‡ We quote the text of the decree as given by Carlo Marino : "Capta fuit pars quod verixelli (s'intendono per queste i minuti lavori di vetro che or diciamo *contaria* e lavori nominati pive, perle, margherite) possint lavorari Venetiis in locis ubi fornellus eorum distet a domibus ab omni parte passus quinque ad minus, et si consilium contra revocetur," t. v. p. 260.

states of Barka, in which they had been stopping, they passed on to Bokhara, to the south of the Caspian Sea, and afterwards proceeded to the court of Kublai, Great Khan of the Tartars, whose sovereignty extended over the greater part of Asia. On their return to their own country, after twenty years absence, they found Marco Polo, whom they had left in the cradle. Their narrations inflamed the imagination of the young man, who desired to accompany his father and uncle in a new journey, on which they set out. Marco Polo went with them in 1271. In 1274 he arrived at the court of Kublai-Khan, attached himself to the service of that monarch, became governor of one of his provinces, and was trusted by him with the most important missions.

Extensive travels, and the duties of his high station, filled up the best years of Marco Polo's life. On returning to Venice, in 1295, after having explored the greater part of Central Asia, the shores and islands of the Indian Ocean, and those of the Persian Gulf, he pointed out to his fellow citizens, whose intrepidity as navigators were equal to their love of enterprise as merchants, the routes they must follow, to spread the productions of European industry over Tartary, India, and even as far as China; he described the manners of the people who inhabited these immense regions, and their extraordinary predilection for beads, coloured stones, and jewels of every description, with which they were fond of adorning their persons and of decorating their garments. Nothing more was needed to excite the industrial and mercantile spirit of the Venetians. The glass-makers particularly devoted themselves more zealously than ever to the manufacture of beads and glass jewels, (arte del margaritaio, arte del perlaio) a manufacture which, from that time, formed a totally distinct branch from that of glass vessels (fabbriche di vassellami o recipiendi di vetro e cristallo). The names of Cristoforo Briani and of Domenico Miotto have been handed down to us as having been the inventors of coloured beads (margarite), and as having also been the first glass-makers who turned their attention to the imitation of precious stones.*

This Miotto having been successful in a large speculation

* Bussolin, Work before quoted, p. 49.

he had made at Bassora, almost all the Venetian glass-makers applied themselves to the manufacture of these objects, which were soon dispersed over Egypt, Ethiopia, and Abyssinia, along the coasts of Northern Africa, over Central Asia, India, and even as far as China.*

This commercial movement would necessarily retard during the course of the XIVth century, any progress in the manufacture of glass vessels; in fact, all the information existing upon the glass-making of Venice at this period refers for the most part only to the making of the "margarite," which were a source of such commercial advantages to the republic. Carlo Marino quotes a document from which it appears that a certain Andolo de Savignon, Genoese ambassador at the court of the Emperor of China, obtained from the Great Council full powers to export this same glass jewellery to a very considerable amount. We learn also, from the inventories of the XIVth century, that at that period, richly ornamented vases of glass were still obtained from the East. Yet the manufacturers of glass vessels were already endeavouring to procure the documents most needed for the improvement of their productions. The learned Morelli has given an extract from a manuscript contained in the Naniana Library, and dating from the XIVth century, which gives an account of the processes employed by the Greeks for rendering glass colourless and spotless, for gilding and staining it, and for covering it with paintings.†

Venetian glass-making in the XVth and XVIth centuries.

The invasion of the Eastern Empire by the Turks, and the taking of Constantinople in 1453, which occasioned the immigration of so many artists into Italy, was beneficial to glass-making, as well as to the other industrial arts. To date from the XVth century, we find the manufacture of glass vessels taking a new direction. The Venetian glass-makers borrowed from the Greeks all their processes for colouring, gilding, and enamelling (Fig. 130) glass; and the Renaissance having restored a taste for the fine forms of antiquity, the art of glass-making followed the movement given by the great

* *Ricerche storico critiche sulla laguna Veneta e sul comm. de' Veneziani.* Venezia, 1803, p. 140, 189.

† Carlo Marino, t. iii. p. 222; Cod. MSS. lat. Bibl. Nanianae. Venet. 1776.

artists at that period who rendered Italy illustrious; and vases were produced, in no wise inferior in form, to those bequeathed by antiquity.

Cocceius Sabellicus, a Venetian historian of the XVth century, affords us evidence of the admiration excited in his time by the beautiful and varied productions of the Venetian glass-houses.*

At the end of the XVth century, or rather in the first years of the XVIth, the Venetian glass-makers † distinguished themselves by a new invention, that of vases enriched with filagrees of glass, either white, or coloured, which twisted themselves into a thousand varied patterns, and appeared as if incrusted in the middle of the paste of the colourless and transparent crystal. This invention, which, while it enriched the vases with an indistructible ornamentation, preserved at the same time, their light and graceful forms, gave a new impulse to the manufactories of glass ware, and caused their beautiful productions to be even more sought after by every nation of Europe. (Figs, 133, 136, 139). Accordingly the Venetian government used every possible precaution to prevent the secret of this new manufacture from being discovered, or Venetian workmen from carrying away this branch of industry to other nations.

Filagree glass.

Fig. 130. Goblet of Venetian enamelled glass. XVIth century. Marlborough House.

* "Vitrariis officinis præcipue illustratur... in mille varios colores, innumerasque formas cœperunt (hominum ingenia) materiam inflectere: hinc calices, phialæ, canthari, lebetes, cadi, candelabra, omnis generis animalia, cornua, segmenta, monilia: hinc omnes humanæ deliciæ: hinc quidquid potest mortalium oculos oblectare, et quod vix vita ausa esset sperare . . . magna ex parte vicus hujusmodi fervet officinis." Cocci Sabelliei, *De Venetæ urbis situ*, l. iii.

† Cocceius Sabellicus, born at Vicovaro in 1436, was librarian of St. Mark's in

Already, in the XIIIth century, a decree of the Great Council had prohibited the exportation, without the authority of the state, of the principal materials used in the composition of glass.* On the 13th of February, 1490, the superintendence of the manufactories of Murano was entrusted to the chief of the Council of Ten, and, on the 27th of October, 1547, the Council reserved to itself the care of

Penalties against glass-makers who should carry this art into other countries.

Fig. 131. Fig. 132. Fig 133.
131. Schmeltz † glass. 132. Fluted glass on openwork stem. 133. (Vetro di trina). Vesso in the form of a fish. Coll. Bernal.

watching over the manufactories, to prevent the art of glass-making from being carried abroad.‡ Yet all these precautions

1448, he died in 1506; now we have just seen that, in the enumeration he makes of the various productions of the Venetian glass-works, he does not speak of filagree glasses; the thousand colours of the glass vases, their beautiful and varied forms, are what excite his admiration.

* Carlo Marino, *Storia Civile*, t. ii. l. ii. ch. iv.

† Schmeltz (*Ger.* enamel) glass, produced by fused lumps of coloured glass rolled one into another, so as to imitate marble, cornelian, and other stones.

‡ Bussolin, p. 62.

did not appear to have been sufficient, and the inquisition of the state, in the twenty-sixth article of its statutes, announced the following decision:—"If a workman transport his art into a foreign country, to the injury of the republic, a message shall be sent to him to return; if he does not obey, the persons most nearly related to him shall be put into prison. . . . If, notwithstanding the imprisonment of his relatives, he persist in remaining abroad, an emissary shall be commissioned to put him to death." M. Daru, who, in his "Histoire de la république de Venise," has given us the text of this decree, which he had copied from the archives of the republic, adds that, in a document deposited in the archives of foreign affairs, two instances are recorded of the execution of this punishment on some workmen whom the Emperor Leopold had enticed into his states.

Resolutions of the Great Council of the 22nd of March, 1705, and the 13th of April, 1762, confirmed the measures previously taken, and added new rigours to the ancient laws, not only against the workmen who should establish themselves in foreign countries, but also against those who should divulge the secrets of the manufacture.*

Privileges granted to glass-makers.

If the government of Venice thought it needful, on the one hand, to display all its severity against the glass-makers who should thus betray the interests of their country, it, on the other hand, loaded with favours those who remained faithful to its service, and great privileges were accorded to the island of Murano. From the XIIIth century, the inhabitants of Murano, for instance, obtained the rights of citizens of Venice, which rendered them admissible to all the high offices of the state.† In 1445, the senate granted them the right of electing a Chancellor (cancelliere pretorio) to administer justice in Murano, and a delegate to the Venetian government to treat of the matters which interested their community. A civil, criminal, and administrative legislation, special to the island of Murano, was embodied in a code, known by the name of "Statuto di Murano," and confirmed by the senate in 1502;

* Bussolin, p. 63.

† Vettore Sandi, *Storia civile della rep. di Venezia*, parte i. vol.ii. p. 548. Ven. 1755.

by this the island was still governed, until the fall of the republic.* It resulted from this privilege, that the police of Venice had no jurisdiction over Murano, and the magistrates of the island alone had the right, as far as its territory extended, of proceeding to the arrest of persons attainted of crimes or offences.

The art of glass-making was not, however, considered as an art purely mercantile. A decree of the senate, of the 15th of March, 1383, relative to some privileges granted to the manufactories of Murano, concludes with the following words, which show how highly glass-making was esteemed: "Ut ars tam nobilis semper stet et permaneat in loco Muriani." † The glass-makers were not classed among the artisans; they received, as well from the senate of Venice as from several foreign sovereigns, many privileges remarkable for the age in which they were granted. Thus, the noble Venetian patricians might marry the daughters of the master glass-makers, without derogating in any manner from their dignity, and the children born from these marriages, retained all their quarterings of nobility. ‡ And, further still, when Henry III. went to Venice in 1273, he granted nobility to all the master glass-makers of Murano.

It having been decided by a resolution of the Corporation of Murano, that a golden book, like the "Libro d'oro" of the Venetian nobles, should be established for registering the names of the original families of Murano, the senate confirmed this resolution the 20th of August, 1602. This book still exists in the archives of Murano. § We read there the following names as being those of the first glass-makers: Muro, Seguso, Motta, Bigaglia, Miotti, Briati, Gazzabin, Vistosi, and Ballarin.

Protected by severe laws, invested with great privileges, and encouraged by honourable distinctions, the manufacturers of Murano were then elevated to the rank of distinguished artists. Their enamelled vases of the XVth century, their graceful cups, their ewers, and filagree ornaments of the XVIth century were in no wise inferior as regards either

* Fanello, *Saggio storico di Murano.* Ven. 1846, p. 29, 30.
† Ibid. p. 38.
‡ Bussolin, Work before quoted, p. 69. § Ibid. p. 66.

form or decoration to the finest productions of antiquity, and all Europe became their tributary during two hundred years.

Extinction of the art in Venice.

At the beginning of the XVIIIth century, the tyrant fashion, which causes the most beautiful objects of art to fall into disrepute, made the glassware of Bohemia—glass cut in facets—alone to be sought after, to the great detriment of the beauty and lightness of the forms. Some manufactories in France and England began to yield fine productions in cut glass, and the Venetian glass-ware, with filagree ornaments, gradually fell into disuse. The fall of the Venetian republic, the abolition of the privileges granted to the glass-maker and of the rules which governed their coration, gave the last blow to the art of glass-making at Venice, and the manufactories which still existed at Murano, soon confined themselves to producing domestic utensils in common glass.

Fig. 134. Pilgrim's bottle, enamelled glass. XVIth century. Coll. Soltykoff.

The finest vases of the XVth and XVIth centuries, that had escaped the ravages of time, were nevertheless preserved in the palaces of the Italian nobility, no longer as objects of common use, but as evidences of a brilliant and extinct branch of industry.

The manufacture of glass-ware with ornaments in filagree or in coloured threads, is no longer a secret, and now that collectors have drawn attention to its merits, imitations have been attempted by many manufacturers, who without having yet attained to the lightness and perfection of the forms of the XVIth century, have still introduced into commerce glasses of some elegance.* Yet amateurs who have

* Bontems, director of the glass manufactory at Choisy-le-Roi, is the first who has recommenced this manufacture. He had the kindness to let the canes or rods of glass with filagree patterns, which form the basis of these productions, and even different kinds of vases, be made in our presence. To his kindness we stand indebted for a full practical knowledge of the processes of the manufacture.

collected the ancient glass-ware of Venice are unacquainted with the processes by means of which these capricious designs of coloured filagree were preserved uninjured in the midst of a colourless substance that could only be wrought into vases by being subjected to fusion. Not one of the old authors whose works have celebrated the wonders of Venetian industry, has dared to divulge the secret, in consequence, no doubt, of the severe laws which would have punished such an indiscretion: we think, therefore, that amateurs will be glad to find some hints upon the manipulatory operations employed.*

Process of manufacture of filagree glass.

The vases with coloured threads and filagree ornamentations are composed of the assemblage of a certain number of small glass canes † of cylindrical form, $\frac{1}{3}$ to $\frac{1}{4}$ of an inch in diameter, made either of opaque white glass, ‡ of coloured glass, or of glass enclosing filagree patterns. These canes, prepared beforehand, are disposed in such order, as the glass-maker

* We have endeavoured, in our descriptions of the Venetian glass ware, to restore the names which were given, in the XVIth century, to the vases with filagree patterns, as well as to the elementary materials out of which they were made; Garzoni, who lived in the first half of the XVIth century, and Fioravante, who died in 1588, are the only authors who furnish us with any details, the one in his "Piazza universale," the other in the work entitled "Lo specchio di scienzia universale." The terms they employ are often obsolete, and are scarcely understood by the glass-makers. In order to determine as much as possible their meaning, we have had recourse to M. Bussolin, a manufacturer at Murano, who had given his attention to restoring to his country the manufacture of filagree glasses, and has published a sketch of the art of glass-making among the Venetians.

† These little rods were called *canne* by the glass-makers of Murano, and those enclosing filagrees, *canne-ritorte*. "Cane," invariably means a solid stick of glass, "tube" a hollow one.

‡ The name of white enamel is commonly given, even now, at Venice, to the threads and filagrees of an opaque, or milk white, which decorate the Venetian glasses; we shall not adopt this denomination, though enamel is in truth, but a coloured glass. We reserve the term enamel; 1st. to vitreous compositions either dead white or variously coloured, which are ground and laid on with a pencil upon glass, porcelain, pottery, and metals; 2nd. to the vitreous preparations of various colours which are melted and re-united by juxtaposition in a metal excipient, and which constitute those kinds of mosaics which are designated as incrusted enamels; 3rd. the transparent, vitreous compositions employed in the *pitture a smalto* of the Italians, the translucid enamels upon relief. All these vitreous compounds are fixed upon their excipient by a heat sufficient to melt them partially without affecting the object upon which they are applied. With respect to the dead white or coloured glasses, used by the glass-makers at the heat of a glass furnace, and which enter into the composition of vases during their fabrication, and form one of their constituent parts or elements, these ought to retain the name of glass.

But, the opaque, dead white glass did not receive in the XVIth century the name of white enamel; it was designated by that of *latticinio*, which may be translated by milk-white. "If it is desired to make enamelled white glass," says Garzoni

may choose, and are often placed alternately with canes of plain white glass; * they are welded together by fusion and blowing, and finally moulded, when they form a compact homogeneous paste (*paraison* †), convertible like any piece of ordinary glass into vases of every form. As many as twenty-five or thirty, or even forty canes may enter into

Fig. 135. Fig. 136. Fig. 137.
135. Enamelled hanap. XVI century. 136. Ewer, of filagree glass. XVIth century.
137. Bottle, enamelled glass. XVth century. Coll. Soltykoff.

the composition of a Venetian vase; it is therefore indispensable before explaining the processes of their fabrication, to describe the making of these canes of glass, which are, so to speak, the elements of their composition.

In order to make a cane of coloured glass,‡ the glass-blower

"they add chalk of tin (oxide of tin) and it is with this glass, which is called *latticinio* that are made various ornaments upon glasses of crystal." (*La piazza universale*, discorso lxiv.) We purpose retaining this ancient term *latticinio* for threads and filagrees of opaque white glass.

* By white is understood colourless and transparent glass.

† By *paraison* is understood a mass of glass in the state of paste, adherent to the pipe and already blown; it may be regarded as the first stage in the production of a piece, the technical term in English is "metal."

‡ It is known that by adding certain metallic compounds to glass, at the moment of fabrication, a colouring may be imparted to it, admitting of an infinite variety of tints. The opaque white glass, the *latticinio* most usually employed in the filagree Venetian glasses, is only a glass coloured milk-white by oxide of tin or arsenic; under the denomination of *coloured glass*, we therefore include the *latticinio*, as well as all other glasses coloured of different tints.

takes at the end of his blowing-iron * the requisite quantity of glass from the pot in which it is fused, and rolls it upon the marver, in order to cause the substance to adhere to his blowing-iron, and to make it into a cylindrical mass, of from $2\frac{1}{2}$ to 3 inches long, which he allows partially to cool to give it consistency. He then dips the end of the blowing-iron, charged with the little column of coloured glass into a melting-pot containing ordinary white glass—in order to surround the coloured glass with a casing of white. He draws the blowing-iron from the pot and again "marvers" the lump to make the transparent glass of an even thickness round the coloured, and to form of the whole a kind of truncated column of from $2\frac{3}{4}$ to 3 inches in diameter.

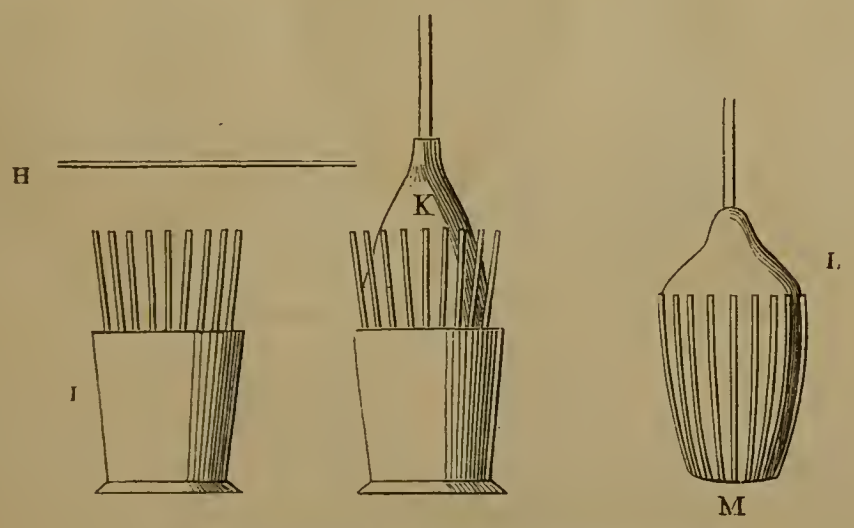


Fig. 138. Method of making the filagree canes of glass.

This column is then exposed to a strong heat, to weld the layers together, and next drawn out so as to form a cane of from $\frac{1}{8}$ to $\frac{1}{4}$ of an inch in diameter, the centre of which is coloured, surrounded by a very thin surface, of white colourless glass. It is then divided or "whetted off" into pieces of different lengths. These little canes, thus prepared and modified, by the flattening that takes place in the making of the vases form these simple threads, of various width, with which a number of the Venetian vases are enriched. They

* A hollow iron tube about four feet long lessened at the mouth, and enlarged at the end which is heated and placed into the pot of melted glass, or "metal." The glass instantly adheres to the iron, which is kept in constant rotation until the requisite quantity of "metal" is gathered.

are also the elements of the canes with such varied filagree patterns, of which filagree vases are composed.

The manufacture of canes enclosing filagree patterns is much more complicated and varies according to each pattern. It will be sufficient to know, that by placing in a given order canes (Fig. 138 H) of coloured glass, interspersed at greater or less distances, according to the pattern desired, with canes of

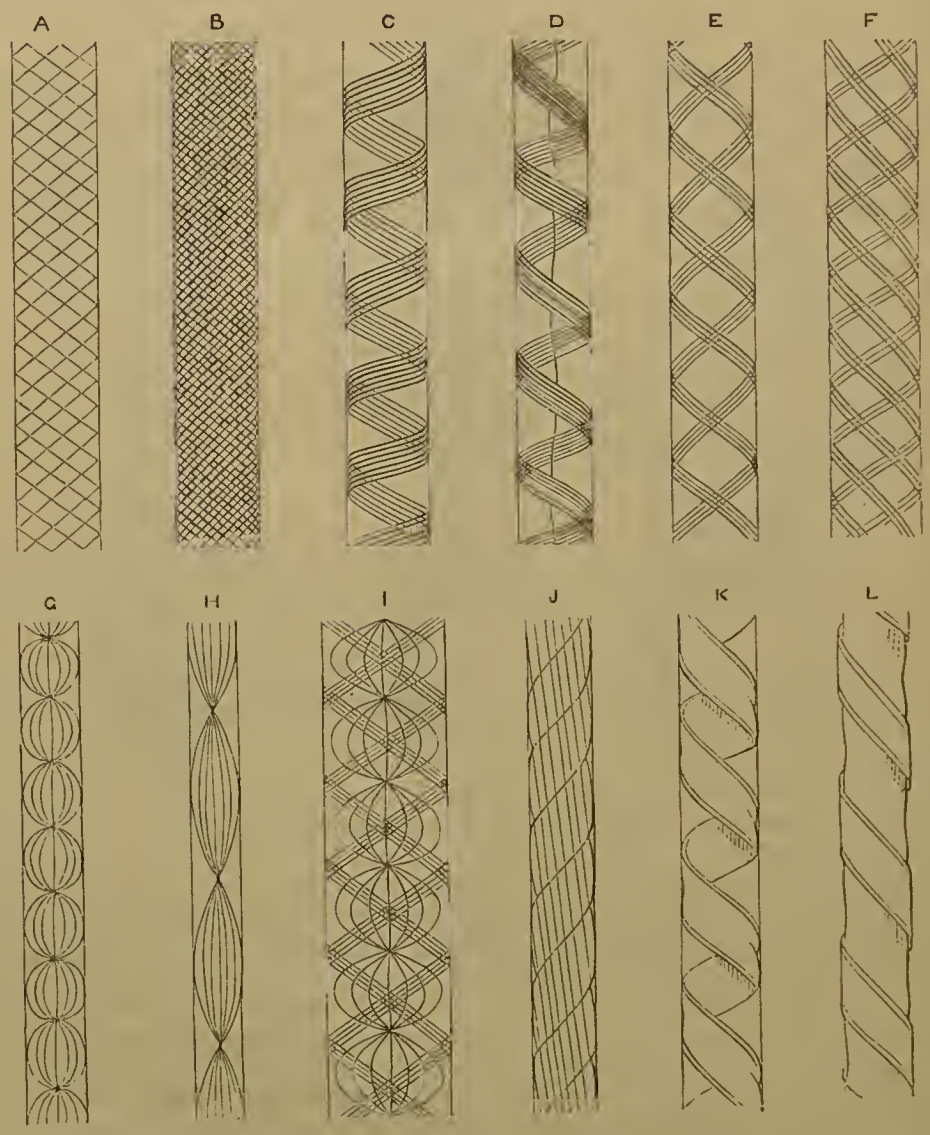


Fig 139. Filagree canes of various patterns.

plain white transparent glass, and by placing these canes, so arranged, either in a "pocket" (*chemise*) * of soft white glass, or against the sides of a cylindrical mould, I, which is

* See also Curiosities of Glass Making, by Apsley Pellatt, for descriptions of the manufacturing processes of Venetian glass.

then filled with white melted glass, K, a thick column is formed in which the rods of coloured glass are distributed either in the interior or on the surface of the white glass, L. This column, which is then taken to the fire, in order to obtain a complete adherence of all the parts of which it is composed, is afterwards drawn out to form a little cane of white glass of from $\frac{1}{8}$ to $\frac{1}{4}$ of an inch in diameter, in which the canes of coloured glass are reduced to threads of extreme tenuity, which twist in varied patterns in the centre of the newly-obtained cane, or roll in spiral threads upon its surface, according to the previous arrangement, and the various inflexions which the workman may have given the material in the act of drawing it out.* Canes of

* M. Bontems published in April, 1845, an "Exposé des moyens employés pour la fabrication des verres filigranés." We shall transcribe here some of those which he points out for the making of canes with filagree patterns: "Pour obtenir des baguettes à fils en spirale rapprochés, qui, par leur aplatissement, produisent des réseaux a mailles égales, on garnit l' intérieur d'un moule cylindrique, en métal ou en terre à creusets de baguettes de verre coloré à filet simple alternées avec des baguettes en verre transparent; puis le verrier prend au bout de sa canne, du verre transparent dont il forme un cylindre massif qui puisse entrer dans le moule garni de ces petites baguettes et chauffé préalablement, un peu au-dessous de la chaleur rouge. En chauffant ce cylindre fortement, il l' introduit dans le moule où il le refoule de manière à presser les baguettes qui adhèrent ainsi contre le verre transparent; il enlève la canne en retenant le moule, et entraîne ainsi les baguettes avec le cylindre; il chauffe encore et il marbre pour rendre l' adhérence plus complète; enfin, chauffant l'extrémité du cylindre, il tranche d'abord cette extrémité avec les fers, la chauffe de nouveau, la saisit avec une pincette, et la tire de longueur avec sa main droite pendant que de la main gauche il fait tourner rapidement la canne sur les bardelles de son banc. Pendant que l'extrémité de la colonne s'allonge, les filets de verre coloré s'enroulent en spirale autour d'elle. Quand l'ouvrier a amené à l'extrémité une baguette de la dimension voulue, environ 6 millimètres de diamètre, et que les filets sont suffisamment enroulés, il tranche avec la pincette, chauffe de nouveau l'extrémité de la baguette, et, la saisissant et l'étirant pendant qu' il roule rapidement la canne, il procède ainsi à la production d'une nouvelle baguette, et ainsi de suite, jusqu' à ce que toute la colonne soit étirée." Fig. 139. A and B are canes of threads more or less close obtained by this process.

"Pour fabriquer des baguettes qui, par leur aplatissement, produisent des filets en quadrilles, on place dans le moule cylindrique, aux deux extrémités d'un seul diamètre, trois ou quatre baguettes de verre coloré à filet simple, alternées avec des baguettes en verre transparent; on garni ensuite la capacité interieure du moule de baguettes transparentes, afin do maintenir les baguettes à filets colorés dans leur position, et on opère comme pour les baguettes précédentes."

By this means are obtained canes like Fig. 139, F.

"Pour obtenir des baguettes produisant par leur aplatissement des grains de chapelet, on fait une paraison soufflée, dont on ouvre l'extrémité opposée à la canne, de manière à produire un petit cylindre ouvert; on l'aplatit afin de ne donner passage qu' à des baguettes, et on introduit dans ce fourreau cinq ou six baguettes à filets simples, alternées avec des baguettes de verre transparent; on chauffe, on ferme l'extremité opposée à la canne, puis l'ouvrier presse sur la paraison plate pendant qu' un aide aspire l'air de la canne de manière à le faire sortir de la paraison et à produire un massif plat et dans lequel sont logées les baguettes à filets. L'ouvrier rapporte successivement une petite masse de verre chaud transparent sur chacune

glass, with varied filagree patterns, prepared for the making of vases, are represented, Fig. 139.

The glass-maker having provided himself with the different canes of coloured filagree, and plain white glass, may now proceed to the fabrication of vases. He arranges around the inner surface of a cylindrical mould, formed of the stoneware used for a crucible, or of metal, as many canes as he requires to form a complete circle round the sides of the mould. These canes are fixed to the bottom of the mould by means of a little soft earth which has been spread over it. The workman can choose his canes of various colours and patterns, forming so many different combinations of filagree; he can place them alternately, or can intersperse them with canes of plain white glass. The canes being thus arranged, are heated in the glass furnace; the glass-maker then gathers, with the blowing-iron, a small quantity of white glass, to make a solid ball, with which he fills up the empty space formed by the circle of rods which cover the inner surface of the mould; he blows again to make the rods adhere to the ball of plain glass, and takes it all out of the mould. The assistant workman instantaneously applies upon the coloured or filagree canes, which are thus made to form the exterior surface of this cylindrical mass, a string of soft glass, in order to fix them more

des parties plates de sa paraison, et il marbre pour cylindrer sa masse: il obtient ainsi une petite colonne dans l'intérieur de laquelle sont rangés, sur un même diamètre, les filets colorés; il procède ensuite, comme pour les baguettes précédentes, en chauffant et étirant l'extremité pendant qu' il roule rapidement la canne sur les bardelles. Par ce mouvement de torsion, la ligne des filets colorés se présente alternativement de face et de profil, et produit des grains de chapelet."

One may imagine that the canes of coloured glass placed in the centre of the column, being, by the motion of twisting, crossed one upon the other, appear to represent the beads of a rosary formed of threads, leaving between them a colourless space obtained by canes of transparent glass which alternate with canes of coloured glass.

A cane obtained by these means is to be seen, Fig. 139 G.

"Il arrive souvent que l'on combine les grains de chapelet avec les quadrilles des baguettes précédentes, en se servant, pour introduire dans le moule préparé pour les baguettes à quadrille, du cylindre preparé pour les grains de chapelet."

We shall then have the cane, Fig. 139 I.

"Quelquefois on ménage, au centre d'une baguette, un filet en zig-zag: pour cela on prépare un premier cylindre massif en verre transparent, de moitié du diamètre de celui qu' on veut étirer, et on fait adhèrer, parallèlement à l'arête de ce cylindre, une petite colonne colorée; on recouvre le tout d'une nouvelle couche de verre transparent pour produire un cylindre de la dimension voulue pour entrer dans le moule des baguettes à filets. La petite colonne colorée n'étant pas au centre du cylindre, tournera en spirale autour de ce centre par le mouvement d'étirage et de torsion, et produira un zig-zag par l'aplatissement."

Fig. 139 D is a cane thus prepared.

securely together. The piece being thus arranged at the end of the blowing-iron, the glass-blower carries it to the mouth of the furnace to soften it, to weld all its parts together, and to give it sufficient elasticity to yield to the action of the blowing-iron; he then rolls it on the marver, and when the different canes, united by blowing and manipulation, have reached such a point as to constitute a compact, homogeneous mass, he cuts with a kind of pincers, a little above the bottom, so as to unite the canes in one central point. The vitreous mass thus obtained, is then treated by the glass-maker according to the ordinary processes, and he makes of it, according to his taste, an ewer, a cup, a vase, or a goblet, on which each cane, either coloured, or with a filagree pattern, serves to form a stripe.

If no twisted movement has been given to the vitreous mass in the course of fabrication, the threads of coloured glass on the filagree designs remain in a straight line, proceeding from the lower part of the vase to the upper, or else from the centre to the circumference. If the ball, on the contrary, has been slightly twisted, this twisting then imparts to the different coloured threads or filagree patterns which have entered into the composition of the vase, that spiral direction so often met with in specimens of Venetian glass.* The glass-makers of Murano gave to this twisted work (*torsinage*) the name of *ritorcimento* (Fig 136, and 141).

The Venetian glass-makers succeeded also in making vases composed of two cases or sheets of glass, with simple coloured threads, which were twisted beforehand, and then placed over each other. This super-position, by which the threads of coloured glass were crossed at right angles, produces a network of opaque threads (Fig. 140), which, in consequence of their thickness, leave between each mesh of this kind of net, a small bubble of air, enclosed between the two layers of white glass, which form the foundation of the vase.

These pieces are, perhaps, the most remarkable performances of the glass-makers of Murano. As yet no attempt at imitation has been entirely successful. M. Bontems

* To make a twisted or spiral cane, the pucellas, or pinchers, holds the apex, (Fig. 138 M) in a fixed position, while the ornamental mass still adherent to the blowing-iron, is revolved during the drawing till the requisite twist is given.

thought that these vases might be produced by blowing a first ball of glass with single twisted threads, then a second with single threads twisted the contrary way; that one of these balls should then be opened to introduce the other, so as to make them adhere; that the threads of coloured glass would then cross each other, and thus produce meshes of equal size, supposing the two balls to have been well-prepared.* (Fig. 140).

They must, indeed, have a perfect similarity, very difficult

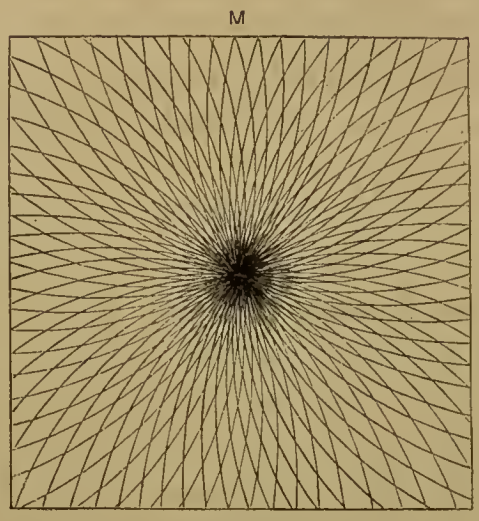


Fig. 140.

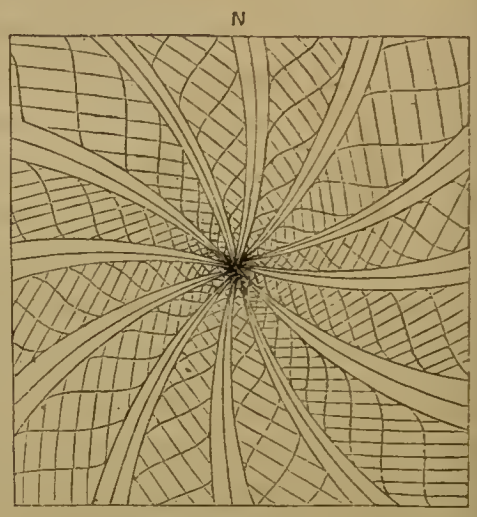


Fig. 141.

to obtain, in order to ensure success by such a process. M. Carrand, who has deeply studied the subject of Venetian glass, thinks that vases of this kind were formed by a single ball; and suggests the following as the process employed: the glass-maker blew a ball of glass of single coloured threads, so as to take the form of a globe; he next gave a twisted movement to the blowing-iron, to give the coloured threads a spiral direction; and he then pushed up one hemisphere of the globe within the other (as might be done with an inflated bladder), so to bring it to the shape of a cap. The one hemisphere would then form, as it were, a lining to the other, and the threads of coloured glass would naturally cross each other.

The Venetians also made vases with pieces of glass cut off the ends of the filagree canes, the section thus presenting

* Bontems, *Exposé de le fabrication des verres filigranés*, p. 8.

variously coloured stars, scrolls, and other geometrical forms.* These slices or segments of canes, cut about half an inch in length, were scattered between two layers of white or tinted glass (Fig. 142); the substance was then marbled and blown again, to form of the whole a new mosaic mass ready to be shaped into vases of every description.

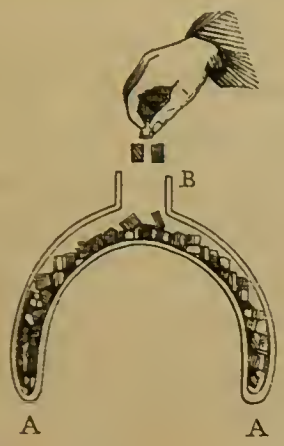


Fig. 142. Method of making the millefiore glass.

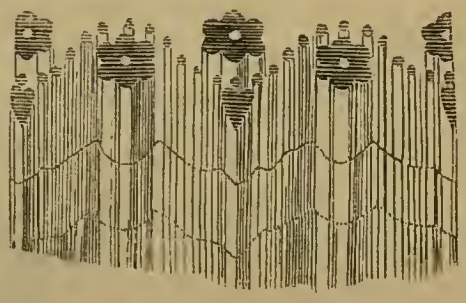


Fig. 143. Method of making the mosaic work.

This was an imitation of the ancient mosaic glass, (Fig. 143) but notwithstanding their skill, the Venetians have in this style fallen far short of the glass-makers of antiquity.

Vases of grotesque forms have also issued from the Venetian manufactories; assuming generally those of fantastic animals. (Fig. 133.) These vases are pierced with several holes to receive and pour out the liquid, or constructed on the principle of the syphon. They were employed, according to Fioravanti, in operations of alchemy, an art much in vogue in the XVth and the beginning of the XVIth century; they were also used in pharmacy, and for distillation. This author mentions Nicolas de L'Aigle as being in his time the most

* "Le verrier formera, par exemple, au bout de sa canne, un petit cylindre massif en verre rouge, autour duquel il appliquera cinq ou six cueillages (couches) de verre bleu qu'il façonnera avec sa pincette pour former des ailes prismatiques triangulaires, dont la base est sur le cylindre rouge; puis il remplit les intervalles entre ces ailes avec un verre d'une autre couleur, blanc opaque ou jaune; il marbre et enveloppe le tout d'une couche d'une couleur transparente, soit violet clair. Il peut ensuite introduire cette colonne dans un moule garni intérieurement de baguettes d'une autre couleur, ou blanc opaque, qui, par leur section, feront un tour de perles blanches. . . . . On peut varier ainsi à l'infini. Quand le verrier a composé sa colonne comme il le désire, il la chauffe fortement et l'étire à la grosseur de 10 à 15 millimètres. . . . . On tranche ensuite la baguette en tronçons d'environ 1 centimètre de longueur."—Bontems, *Exposé des moyens pour la fabrication des verres filigranés*, p. 8.

skilful maker of vessels of this description. They were more especially manufactured in the XVth century, and are mentioned in the list given by Sabellicus of the different products of the Venetian glasshouses.

The glassmakers of Murano had, as it has been seen, a great variety in their productions, which may be divided into six classes.

Character of the different kinds of stoneware.

The first includes vases made with white, transparent and colourless glass; some are decorated with threads of coloured glass, laid externally on the white, according to the processes of the Greeks, which have been explained by Theophilus. (Figs. 132, 145.)

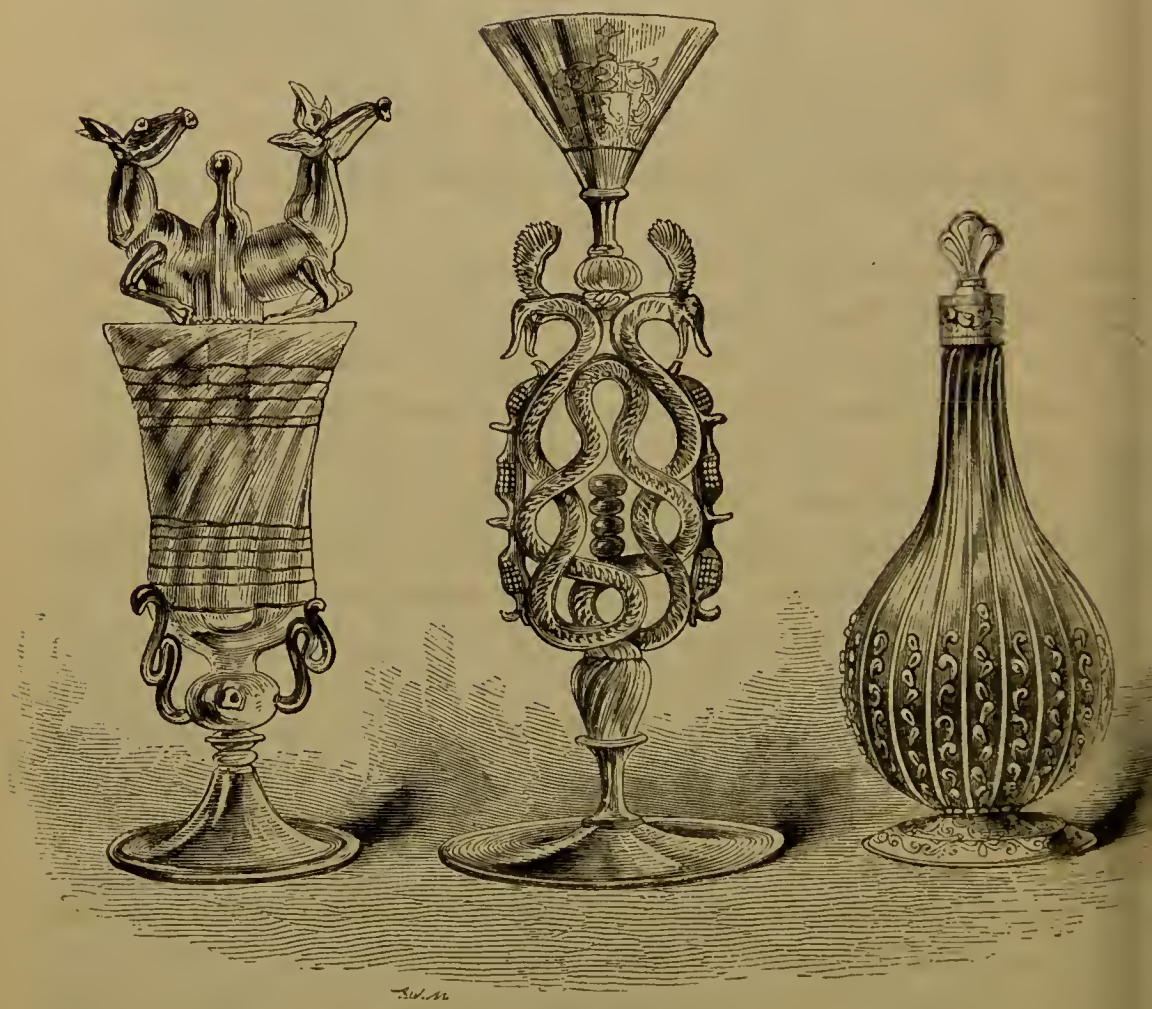


Fig. 144. Fig. 145. Fig. 146.
144 German drinking glass. 145. Venetian glass on openwork, twisted stem.
146. Venetian enamelled bottle. Coll. Bernal.

The second consists of vases made with glass tinted in the mass, that is, glass which received all its colouring from

metallic oxides in the course of fabrication, and before it was used in the making of vases. (Fig. 131.)

The third comprehends enamelled vases, that is to say, made of white or coloured glass, and afterwards decorated with ornaments or subjects in gold, vitreous colours or coloured enamels, laid on with a brush, and fixed in the muffle or enamel furnace. This ornamentation is executed by the processes described by Theophilus. (Figs. 130, 134, 135, 137, 146.)

The fourth includes glass vases with ornamentations of filagree, that is, fashioned with canes prepared beforehand, and enclosing either threads of glass milk white (*latticinio*), or coloured, or varied designs in filagree. The glass-makers at first called them *vasi a ritortoli*, and afterwards *vasi a ritorti*.* This class may be divided into two sections: the first comprising the vases with ornaments solely of *latticinio*,† and it must be admitted that the prettiest works of the Venetians contain in general only milk-white filagrees; the second, those made of canes of glass coloured in different tints, often mixed with canes of *latticinio*. (Fig. 136.)

The fifth division comprises vases composed of two sheets or strata of glass placed one over the other, and exhibiting a network of filagree. They were known in the XVIth century by the name of *vasi a reticelli*.‡ (Fig. 133.)

The sixth takes in vases of mosaic glass, made in imitation of ancient glass ware, and which also received the name of *millefiori*, or *vasi fioriti*.

§ IV. GERMAN GLASS.

The great success of the Venetians excited the emulation of their neighbours. (Fig. 144.)

German enamelled glass ware.

Unable to attain to the perfection of the filagree glass, some German glass-makers produced, towards the middle of the XVIth century, some vases which were decorated with enamel colours. The form of these vases is almost always cylindrical; they differ only

* Vases à ornementation filigranique—Vases à dentelles.
† Vasi a ritorti di latticinio.
‡ Verre doublé à réseau de filigranes.—Vetro di trina.

in their dimensions, which in some attain the height of nearly twenty inches. The paintings have no great merit, but they bear a stamp of originality which causes them to be much prized by amateurs. The designs of most frequent occurrence are the Emperor and the electors of the empire, the imperial eagle bearing heraldic achievements upon his wings, and various escutcheoned shields; we rarely find on them any other compositions. They generally bear inscriptions and the date of their manufacture.

The oldest date we have met with is that of 1553 upon a vase, with the arms of the Elector Palatine, preserved in the Chamber of Arts at Berlin.

This manufacture appears to have been given up in the first quarter of the XVIIIth century.

The German artists in glass produced, towards the middle of the XVIIth century, some vases enriched with paintings in vitreous colours, possessing a much higher value, considered as works of art. These are vases usually of cylindrical form, not exceeding the dimensions of a goblet. The subjects which cover over almost the whole circumference of the cylinder, are drawn with great talent and nicety; the paintings, perfect in execution, may be compared to the most delicate paintings on glass of the second half of the XVIth century. They are most frequently executed in grisaille, or in brown camaïeu: yet we meet with some that are polychromatic.

These enamelled glasses are very rare. The Chamber of Arts at Berlin possesses several signed by Johann Schaper of Nuremberg, with the dates of 1661, 1665, and 1666; another signed H. Benchert, 1677, and one Johann Keyll, 1675. This manufacture appears to have lasted but a very short time, certainly not beyond the end of the XVIIth century, which may be attributed to the taste for enamelled glass having disappeared in Germany about that period, to give place to the fashion of cut and engraved glass.*

Glass ware of Bohemia.

From the beginning of the XVIIth century, certain manufactories of glass-ware in Bohemia had produced vases of correct, if not graceful forms, which, without being of a very white glass, were yet enriched with ornaments, with subjects, and particularly with

* Kugler *Beschreibung der K. Kunst.* S. 275.

portraits engraved upon the glass. At the end of that century, they had much improved their manufacture, and produced vases of different forms made with glass of tolerable thickness, which was very white and pure, and capable of receiving a fine engraving.

Notwithstanding the fragility of the material, distinguished artists in Germany and Italy were employed in decorating these vases in imitation of rock crystal, with ornaments, arabesques, and engraved subjects, remarkable for their composition, the purity of the drawing, and the finish of the execution. These pretty engravings were often worthy of a less fragile material.

Ruby glass of Kunkel.

The German chemists in the second half of the XVIIth century introduced great improvements in the art of vitrification. Kunkel, chemist to the Elector of Saxony († 1702), who has left a treatise on the art of glass-making, distinguished himself above others. He brought to perfection the processes of the coloration of glass, and produced especially a glass of a fine ruby red, from which were made vases held in high estimation, and rarely met with in the present day, except in the museums of Germany, where a great number have been collected.

CHAPTER X.

THE ARMOURER'S ART.

The great variety of weapons, offensive and defensive, in use from the beginning of the middle ages till the XVIIth century, the rarity of the fine arms of that period, and the space required for such a number of pieces as might serve to give even an imperfect idea of the history of mediæval panoply, will scarcely allow of private collections being formed of works of this nature. We must have recourse to the armouries of nations and of sovereigns to study the forms of the war-harness of the knight, and the different arms successively in use until the exclusive adoption of fire-arms.

Ornamentation of arms during the first centuries of the middle ages.

Great uncertainty exists with respect to the description of armour employed during the first centuries of the middle ages. No complete suit of it remains to us, and were we to rely upon the representations of certain manuscripts, as, for instance, the Virgil in the library of the Vatican, the Bible of Metz, and the "Hours" of Charles the Bald, in the Imperial Library, these would lead to the belief that the Roman description of armour was pretty closely adhered to until towards the middle of the IXth century.

The sword of Charlemagne and that styled St. Maurice's, in the Imperial Treasury at Vienna, which we may, as we have before said, in treating of enamels,* consider as belonging to the Carlovingian period, demonstrate, besides, that the portable arms of those times were often highly ornamented; the hilt and the scabbard of the dress swords were enriched by incrustations of enamel and precious stones.

We cannot fix the exact date of transition from the

* Page 114.

description of armour employed by the ancients to that of the hauberk or coat of mail, which became the most general defensive armour at the time of the Crusades, that is, from about the middle of the XIth century to the beginning of the XIVth century. The first authentic monument where we meet with the use of this mail armour is very clearly defined; the celebrated tapestry of Queen Matilda, representing the invasion of England (1066), by William, duke of Normandy, and his victory over Harold.

From the XIth to the XIVth centuries.

The mail armour, which at first reached only to the knees, as we see in this tapestry (Fig. 36, p. 88), was extended at last to the enveloping of the whole body, including the extremities of the feet and hands, and forming round the head a kind of hood or "capeline" which might be thrown back upon the shoulders at pleasure. It is very evident that this description of armour admitted of no artistic ornamentation. Its beauty consisted only in the fineness and good construction of the links of iron, of which there were several kinds. The helmet, which was called the heaume, was of great simplicity. Until towards the end of the XIIth century, it was in something of a conical form, which terminated in a point more or less acute, and it often was furnished with a prolongation, descending between the eyes to the chin, and known by the name of nasal. At the beginning of the XIIIth century, the cylindrical form was adopted, sometimes rounded at the top, often cut by a horizontal plane. About that time, was introduced the use of helmets more or less closed. The "capel de fer," was also worn, a helmet in the form of half an egg, which did not cover the face. It was placed over the hood of mail, but only in battle, when the want was felt of a more efficient protection. The miniatures in the manuscripts of the XIIth and XIIIth centuries, show paintings representing emblems or armorial bearings, which were the only decorations of the knights' shields of that period.

These different arms, had not yet, therefore, called in the aid of the chaser, the damascener, and the goldsmith. It appears, that the knights reserved all the splendour of their martial costume for the *cotte d'armes*, a kind of surcoat which was worn over the mailed shirt, and reached down to the

knees. It was generally of some valuable material, often richly embroidered with pearls and ornamented with precious stones. It was also made of cloth trimmed with scarce furs. Kings found themselves obliged, from time to time, to repress the extravagance exhibited by their knights in this garment. Philip Augustus forbade those whom he had chosen to

Fig. 147. Back of a saddle. Wood carving. XIIIth century.

accompany him to the crusades to wear scarlet cloth, vair,* or ermine, and Joinville informs us that St. Louis followed the example of his grandfather.

Soon the change which took place in the description of defensive arms, permitted princes and knights to display in their armour a degree of luxury restricted, until then, to church furniture, the jewels of ladies, or the plate of kings.

In the second half of the XIIIth century, they began to apply upon the hauberk of mail, plates of smooth metal in the most prominent parts, particularly at the elbows and knees. At the beginning of the XIVth, the cuirass was adopted, the helmet with the visor entirely closed, and some

* Vair, the skin of the gray squirrel (petit-gris) was the fur held in the XIVth century next in estimation to ermine. It was so called from its variety of colour, the back of the squirrel being gray, the underneath parts of its body white. Cinderella's slipper was of this fur, a "pantoufle de vair," which being wrongly written, "verre," gave rise to the rendering of a glass slipper.

pieces of iron plate armour. "Without fear of being misled, we may," says M. Allom, in his "Etudes sur les armes et armures du moyen age," "fix the date of the adoption of iron plate armour between 1320 and 1330." *

The different parts of this description of armour were, however, only adopted, as it were, piece by piece. Until towards the end of the XIVth century, the knight first wore the gamboison, a kind of garment quilted and stuffed, which enveloped the body; over this, he placed a breast-piece of convex iron, and over this double protection, the hauberk of mail, which reached only to the top of the leg; the closed helmet, brassarts with elbow-pieces, cuisses with

Fig. 148. Surcoat, Helmet, Shield and Gauntlets of the Black Prince. Suspended over his tomb in Canterbury Cathedral.

genouillères, jambs and sollerets for the legs and feet completed this defensive armour. The cotte-d'armes, covered over the hauberk as in the preceding century. The armorial bearings of the wearer, worked in embroidery, formed its customary ornamentation. (Fig. 148.)

The pieces of iron which formed part of this description of armour, did not, at this period, receive any rich decora-

* *Mém. de la société des Antiq. de France*, nouvelle série, t. iv.

tion, to judge at least from existing fragments. The helmets of the XIVth century in the Museum of Arms at Paris, and in other collections, are all plain.

The full suit of armour, entirely of plate iron, was unknown till the last year of the XIVth century or the first of the XVth. We know of no complete armour that can be authenticated as belonging to an earlier period than the reign of Charles VI.; at which time the armour began to be ornamented.

During almost the whole of the XVth century, the decoration of armour consisted chiefly in flutings (Fig. 149), obtained by means of the hammer; embossed ornaments, or those engraved in bands, are first met with upon some of the armour of the second half of this century.

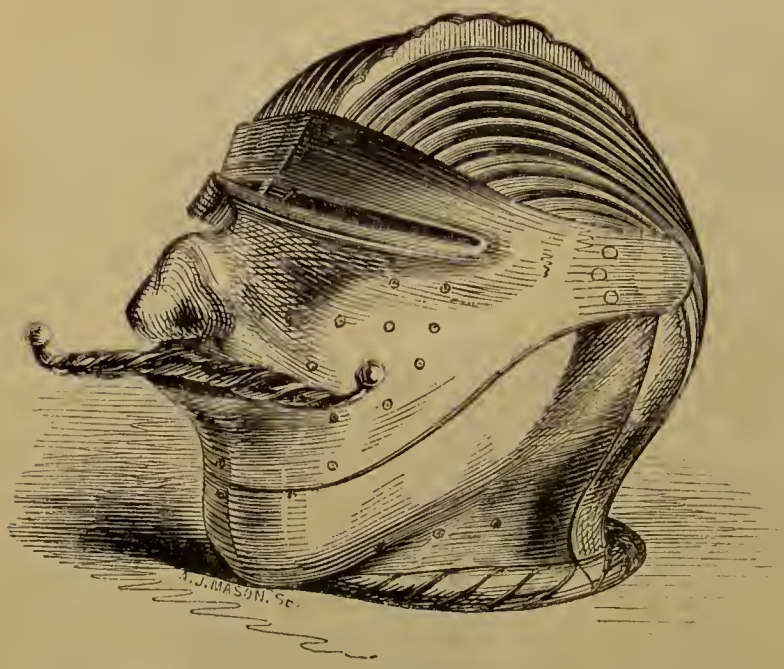


Fig. 149. Tilting bourguinot, fluted top. XVIth century. Coll. Bernal.

With the opening of the XVIth century, a luxury hitherto unknown, was introduced into armour. The services of the chaser, the engraver, the damascener, the goldsmith, were all called in requisition to enrich with decorations, for which the first artists of Italy often furnished the designs. The helmet and every other part of the armour was covered with figures, arabesques, and ornaments in hammer-work, engraved, chased, or damascened with gold and silver; the shields now made, circular or slightly oval, were often carved with very complicated subjects in bas-relief. The horse was as richly caparisoned as the knight; the chamfron, a piece of iron which covered the head of the animal

In the XVIth century.

from the nape of the neck to the nostrils, was specially chosen for the richest decorations. (See Fig. 150. Frontispiece.) At length, iron was considered too base a metal for the armour of the nobility, and was often concealed by a rich gilding, and Sir Walter Raleigh went even further, by appearing at the court of Queen Elizabeth in a suit of armour composed of massive silver.

The imagination and talents of the artists were exercised also on the swords, alike for use and ornament. Every part of the hilt was enriched with ornaments and arabesques in relief, and even with little figures in full or high relief, sculptured in the iron with exquisite delicacy; fine engravings, damascening, and enamels were equally employed in their ornamentation; while the guard assumed an elegant and complicated form. (Fig. 151.)

Fig. 151. Shield ornamented with bas-reliefs. Forming a trophy with sword handles of various forms. XVIth century. Coll. Soltykoff.

The richest armour was executed in Italy. Among the most celebrated artists in this style may be cited Michelagnolo, a goldsmith, the first master of Cellini, extolled by

Vasari for the exquisite chasing with which he enriched a suit of armour for Giuliano de' Medici;* Filippo Negrolo, of Milan, the most skilful artist of his day in chasing and damascening;† he executed elegant bas-reliefs upon iron, and made himself celebrated by the fine armour of Charles V. and Francis I. (Fig. 152); Antonio, Frederigo and Luccio Piccinini, who made wonderful suits of armour for the princes of the Farnese family; Romero who made others of great magnificence for Alfonso d'Este, second of the name, Duke of Ferrara.‡

Fig. 152. Helmet of Francis I. XVIth century. Impl. Lib., Paris.

Germany also reckons among the armourers some artists of great merit. It was specially at Augsburg, so celebrated for its artists in chased metal, that the richest suits of armour were made. The Historical Museum of Dresden contains a suit of armour of Christian II., Elector of Saxony, made by Kollman of Augsburg, which, although in another style, deserves to rank with the best works of the first-rate Italian artists. It is ornamented with bas-reliefs of copper, executed by the process of hammering and finished with a chasing of admirable delicacy; these bas-reliefs are pierced and laid (appliqué) upon the iron. (Fig. 153.) In the same museum are swords, the hilt and guard of which are ornamented with little figures, either in full or high relief of exquisite finish, attributed to Leigeber, an

* Vasari, *Life of Baccio Bandinelli.*
† Vasari, *Life of Valerio Vicentino.*
‡ Cicognara, *Stor. della scult.*, t. ii. p. 436.

artist of Nuremberg. (Fig. 154, and Fig. 17, p. 45.) The Museum of Arms at Dresden (Das historische museum), the finest in Europe, affords the best opportunities for studying the history of art as applied to armour and weapons. This magnificent collection, recently established in one of the wings of the Zwingen has been methodically arranged by Dr. Krankling, director of the Museum, assisted by M. Büttner, the inspector.

France, also, has given birth to several artists famous in

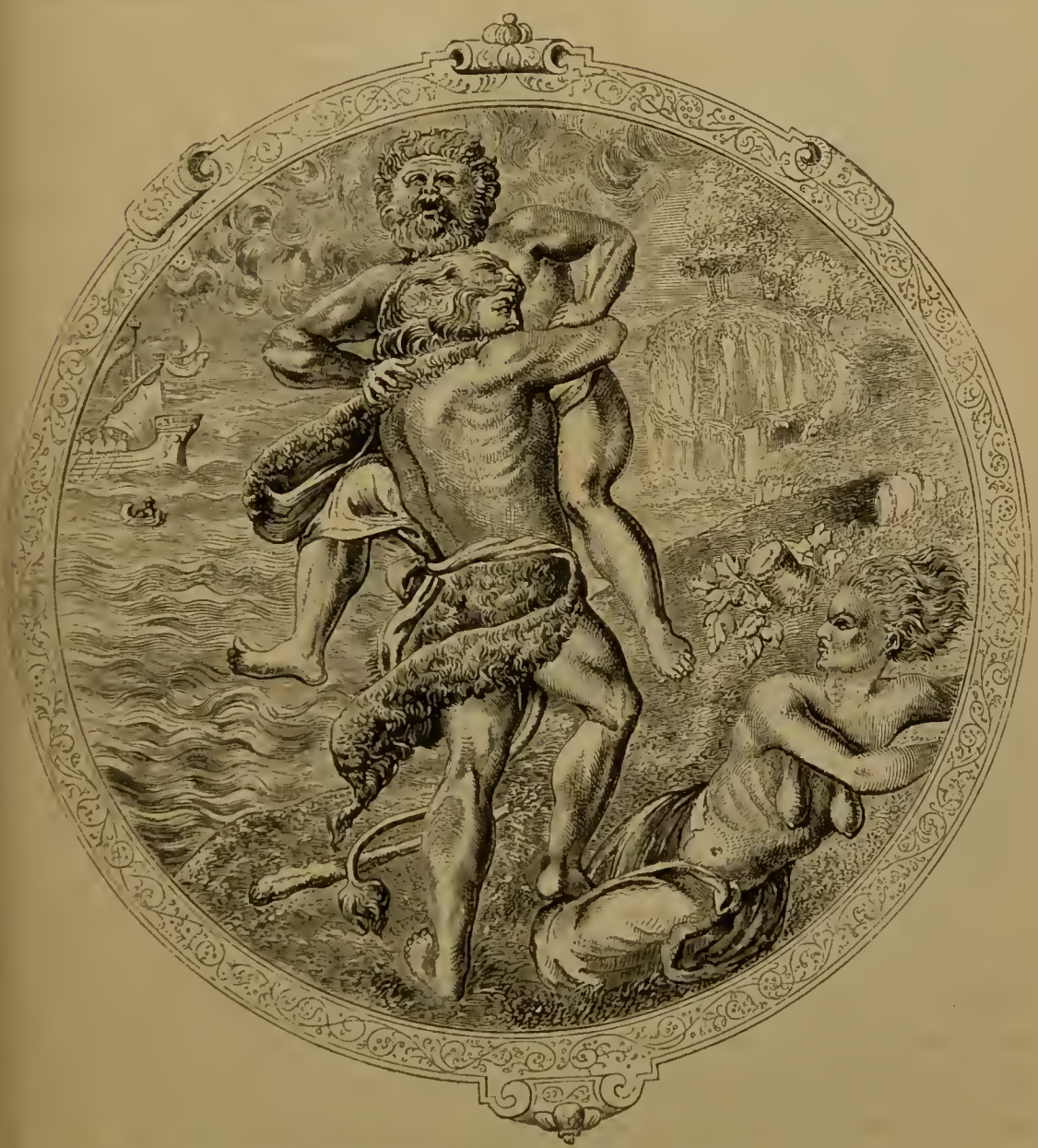


Fig. 153. Hercules and Antæus. Medallion on the horse-armour of Christian II., Historical Museum, Dresden.

the workmanship of arms; Antoine Jacquard, armourer at Bordeaux, who flourished at the end of the XVIth century,

engraved fine chasing in iron, in the style of Leigeber, which he executed upon the hilts of swords.

Ornamentation of fire-arms.

Cannons, which appear to have been first used in the second half of the XIVth century, did fearful execution in battle; but the difficulty of managing these engines of war, and the small number that an army was then able to transport prevented their introduction from diminishing the importance of chivalry, which was never more brilliant than towards the close of the XVIth century, under Maximilian in Germany, and under Charles VIII., Louis

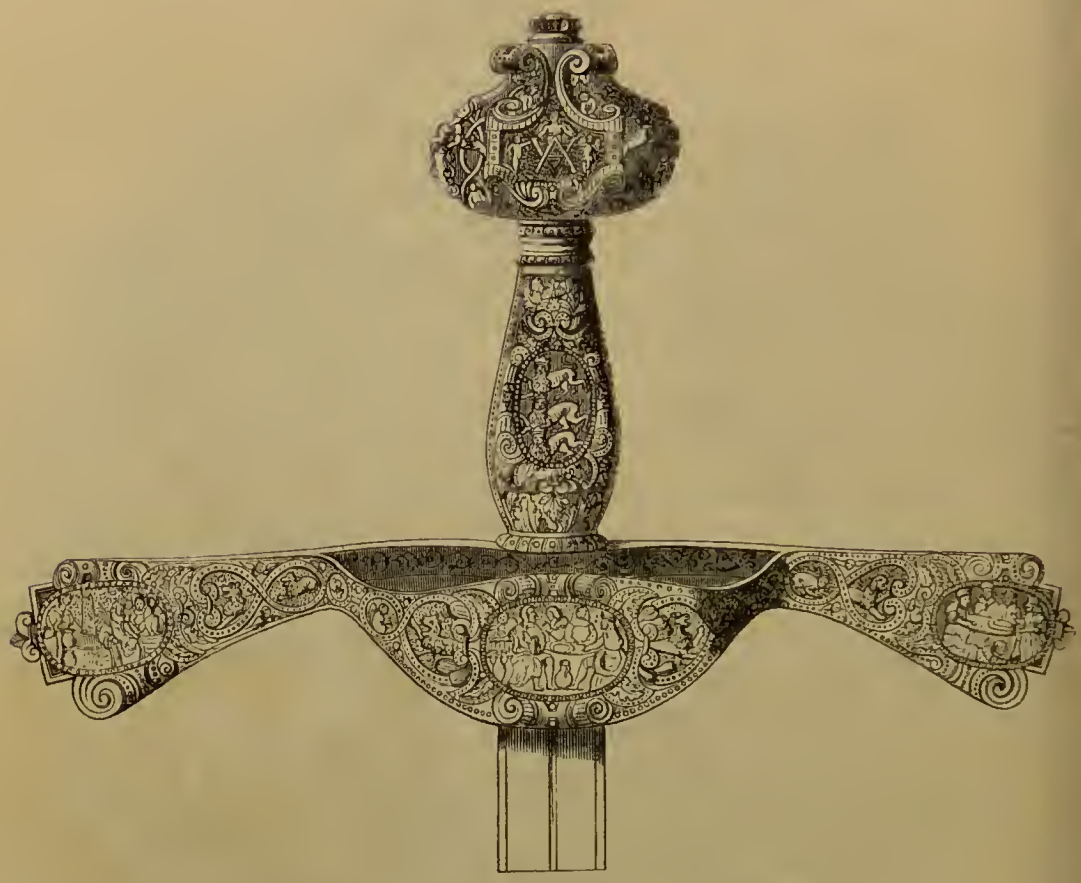


Fig. 154. Sword-handle by Leigeber. XVIIth century. Historical Museum, Dresden.

XII. and Francis I. in France. The idea was then suggested of multiplying the ravages of cannon by distributing to the infantry more portable and more destructive fire-arms. These at first were little cannons which were carried by two soldiers on the march, and placed upon rests or props at the time of battle. Soon the size of these arms was again reduced, and they were fixed in a stock, to allow of the soldiers taking aim more easily, the cheek was applied against the

butt, which was curved and held in the left hand, the end of the piece was supported on the *forquine*, a staff with a kind of iron fork driven into the ground. The powder in the fire-pan was ignited with the right hand by means of a match. This weapon received the name of arquebus. Since being supported by one hand, it was found difficult to adjust, and moreover the rest was inconvenient to carry, the next improvement was to place the match in a long curved bar, called a *serpentin*, which conveyed the fire to the pan by the pressure of the finger upon a trigger placed along the stock. The match presented numerous inconveniences; it was next exchanged for something of less imperfect construction. Under the fire-pan was fixed a furrowed wheel of steel which communicated with the bottom of the pan by means of a slide; and against this wheel was placed a flint held between two strong clams of iron, like the cock of a gun. On removing a catch, the wheel which was turned by a spring, attached to it by a chain, revolved so rapidly against the flint as to elicit sparks, which lighted the powder in the pan. These arms were denominated wheel arquebuses. Not unfrequently both match and wheel were used in the construction of the same piece, in order that the one might take effect in the case of the other failing.

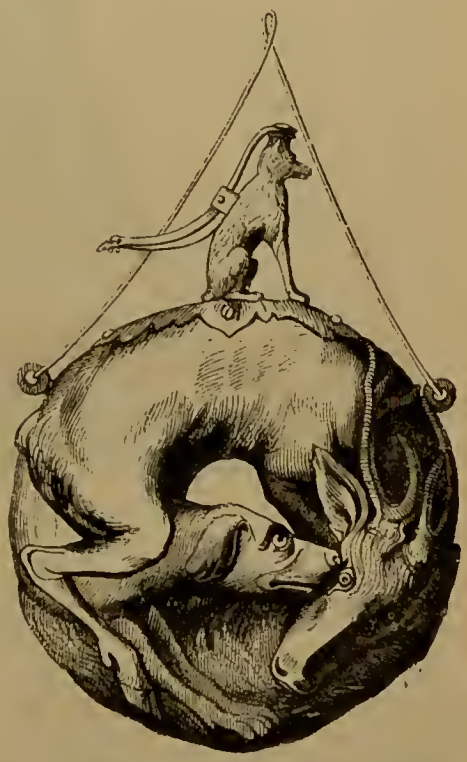


Fig. 155. Powder-flask, carved wood. XVIth century. Coll. Bale.

From the time that fire-arms were made portable, they became fitting subjects for the decoration of art. The barrels of the arquebuses and pistols were enriched, like the armour, with fine chasings and ornaments damascened in gold and silver. The stock was ornamented with fine incrustations; for which were used ivory dyed in various shades, and woods of different colours; sometimes it was overlaid with slabs of ivory, upon which were engraved figures, subjects, and ornaments of great delicacy. The plate of the

lock and the hammer were also richly decorated, having chased on them ornaments, arabesques, figures in relief, and often even charming little figures in full relief. The perfection which the arts of design had by that time attained in Italy, France, and Germany, admitted often of giving a great artistic value to the ornamentation of fire-arms.*

Nor have the sculptors in wood and ivory, the damasceners,

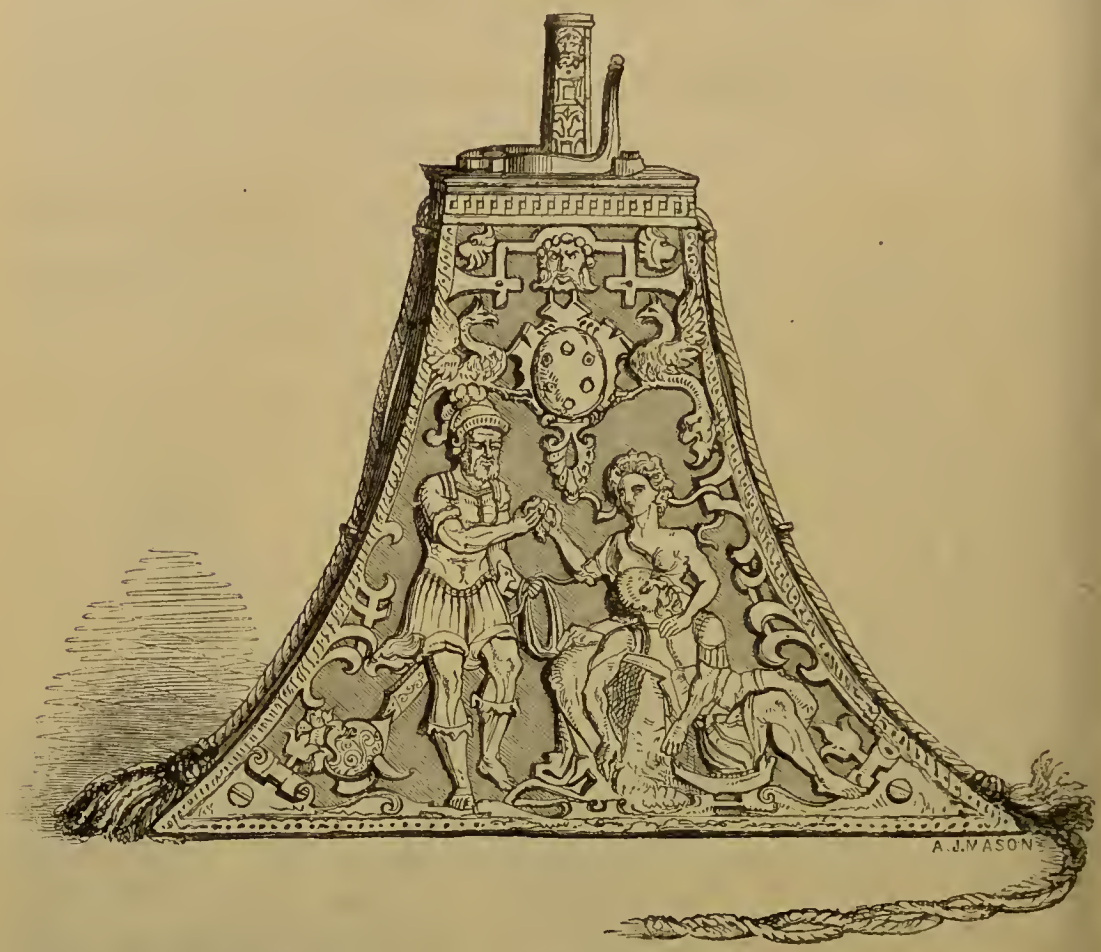


Fig. 156. Chased powder-flask. Subject, Samson and Dalilah. Coll. Bernal.

chasers, and engravers, neglected to exercise their talent upon the powder-flasks. A considerable number have come down to us which may fairly be considered as objects of art. (Figs. 155 and 156.)

* Carré, *Traité de la panoplie*, p. 308.

CHAPTER XI.

THE LOCKSMITH'S ART.

The locksmith's art produced in the XIIth and XIIIth centuries many works of remarkable taste and spirit; but they were applied almost exclusively to the decoration of architecture. In the XIVth century, and still more in the XVth, sculpture having taken possession of the surface of doors upon which the locksmiths in preceding centuries were wont to display their fantastic compositions, these artists were hence led to take a wider field to their labours. The screens of the chapels became works of great importance (Fig. 157); under the skilful hands of the locksmith iron was forged, twisted, fashioned, and bent, to represent forms as complicated, and details as varied, as the architecture of that period. (Figs. 158, 159.) These were followed by crosses, candlesticks, reliquaries, doors of tabernacles, desks, caskets, and hosts of furniture of every kind. All these objects are characterised by their elegance and lightness, and by great richness of workmanship. A tabernacle door (Fig. 160) from the Abbey of St. Loup, at Troyes, is a fine specimen of the locksmith's art in the flamboyant gothic style of the XVth century. Its architectural decorations are very rich; the central figure is that of the Saviour, with the cup in one hand and the host in the other.

In the middle ages.

In the XVIth century the art was not suffered to perish; and the Renaissance, in applying its style to the work of the locksmith, has transmitted to us numerous master-pieces of art. Locks especially were then carried to such a degree of perfection, and their ornamentation was of so high a finish, that they were looked upon as objects of art, and were carried from one place to another

In the XVIth century.

like any other piece of valuable furniture.* The lock from the Château d'Anet, and some others preserved in the Musée

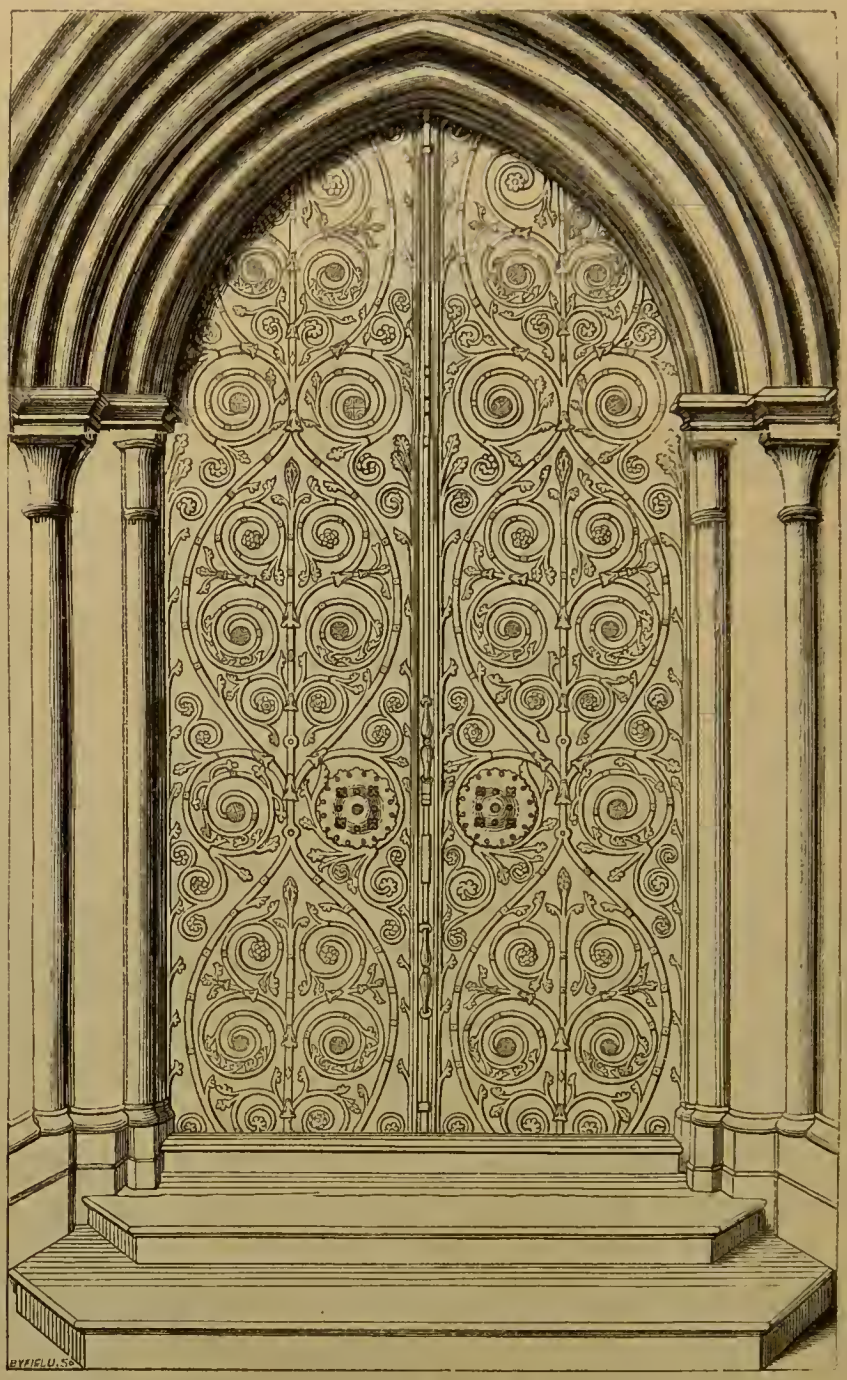


Fig. 157. Iron-work East Door, St. George's Chapel, Windsor. XVth century.

de Cluny, those of the Château d'Ecouen,† and the fine models engraved in the work of Mathurin Jousse,‡ are evidences of the talent of the locksmith-artists of this period.

* *Revue de l'architecture*, t. ii. p. 362.

† M. Alex. Lenoir has published them in his *Musée des monuments Français*, t. ii. p. 6

‡ *Le théâtre de l'art : ouverture à l'art du serrurier.* La Flèche, 1623.

Keys also were treated, in the XVIth and XVIIth centuries,

Fig. 158. Wrought-iron escutcheon. St. George's Chapel, Windsor.

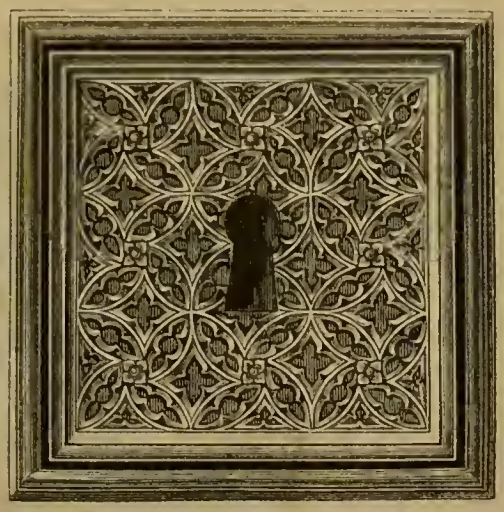


Fig. 159. Worked iron lock. St. George's Chapel, Windsor.

as true objects of art. Nothing can be more graceful than the little figures in full relief, the arms, the cyphers, the orna-

Fig. 160. Tabernacle door. Abbey of St. Loup, Troyes. Flamboyant. XVth century.

ments, and the perforated work, with which was enriched that

part of the key which formed the handle, now replaced by a common ring.

Fig. 161. Bronze knocker, cast and chased. XVIth century. Marlborough House.

Fig. 161 is a door-knocker of either Venetian or Bolognese workmanship of the XVIth century.

CHAPTER XII.

CLOCKWORK.

The Xth century, a period so marked by calamities, and so fatal to the arts in general, gave birth, notwithstanding, to a wonderful invention, that of clocks with toothed wheels, kept in motion by means of a weight. Until then, time had only been measured by the aid of sun-dials, elepsydras, or hour-glasses. This invention is attributed to the celebrated Gerbert, a French monk, who having first been preceptor to King Robert, was elevated to the See of Rheims, and subsequently to the popedom under the name of Sylvester II. He died 1013.

Clocks with toothed wheels.

In the first clocks, the hour alone was indicated by a hand, which was fastened on the axis of a wheel. It was not till the XIIth century that a mechanism was invented for the purpose of striking with a hammer upon a bell, the hours which the hand indicated upon the dial.

The first mention of striking clocks is found in the "Usages de l' ordre de Cîteaux," compiled about 1120, where the sacristan is ordered to regulate the clock that it may strike and wake him before matins. Elsewhere, a direction is given to prolong the reading until the clock strikes.*

The principal clocks made in the middle ages are, taking them in chronological order, that by Wallingford, an English Benedictine († 1325); that of the Tower of Padua, executed by Jacques de Dondis, in 1344; that of Courtrai, which Philip the Bold, Duke of Burgundy, caused to be transported to Dijon, in 1363; that of Henri de Vic, the first that Paris

* Pottier, *Monuments français inédits* t. ii. p. 29.

possessed, and which was placed upon the tower of the palace of Charles V., in 1370; and that of the Château of Montargis, made by Jean de Jouvence, in 1380.

Portable clocks.

It is to be presumed that, as soon as clocks had been invented with toothed wheels and weights, attempts would be made to produce smaller ones suited for the interior of houses. There were some of this kind in use at the end of the XIIIth century, a proof of which we find in the inventory of Charles V., where mention is made of a clock which had belonged to Philip the Fair (1255 † 1314): "Une reloge d'argent tout entièrement sans fer, qui fut du roy Philippe le Bel, avec deux contrepoix d'argent remplis de plomb."* It may be supposed, however, that clocks of this kind were not yet very common in the XIVth century, since they seldom occur in the inventories of that period.

An improvement introduced in the art of clock-making, towards the beginning of the reign of Louis XIth, caused a great extension of the manufacture of clocks; the invention was that of the spiral spring, which, placed in a barrel or cylinder, replaced the action of the weight attached to a string, which had hitherto been made use of as the moving power. This spiral spring, moving easily in a very narrow space, allowed of the construction of portable clocks of very small dimensions. Carovage, or Carovagius, who lived in 1480, is considered as the inventor of portable clocks, with striking bells and alarum.

This invention of a Frenchman excited the emulation of the Italian and German clockmakers, who vied with each other in producing the most extraordinary clocks. A considerable number still exist of the first half of the XVIth century, which may be considered as prodigies of mechanism (Fig. 162). We find some which, besides the hours of the day and night, show the year, month, the day of the month, the day of the week, the festivals of the Church, the phases of the moon, and the path of the sun and planets through the constellations. The most simple are provided with machinery for striking, and an alarum. The portable clocks most remarkable for their complicated mechanism were made principally at Augsburg and

* MS. Bib. roy. no. 8356, fol. 230.

Nuremberg, so often noticed already for their workmen of marvellous skill in every department of art.

A considerable number of these ancient clocks have been carefully preserved in the various museums (Fig. 163). The Imperial Treasury of Vienna and the Chamber of Arts at Berlin, possess some very fine examples. The most curious are contained in the Green Vaults at Dresden. Among these may be specially noticed a piece of workmanship by

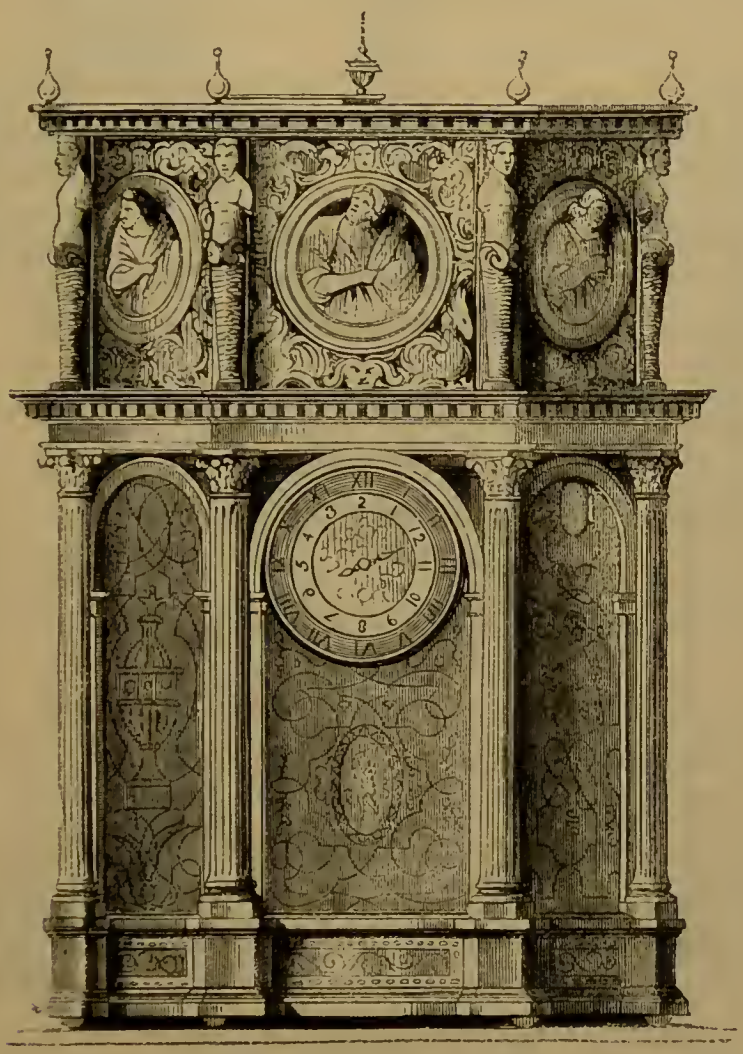


Fig. 162. Silver-gilt clock, with complicated movement, enriched with sculptures and damascened. XVIth century. Coll. Soltykoff.

Werner, a clockmaker of Augsburg († 1544), where we see a Centaur who shoots an arrow at every hour, and a clock with a peal of bells in the form of a steeple, by J. Schlottheim, of the same city, exhibiting a most ingenious mechanism.

These portable clocks soon led to the construction of still smaller pieces, distinguished by the name of watches.

Watches.

We do not exactly know in what year or in what place they were first made. Their invention does not appear to date back beyond the first years of the XVIth century, and is not perhaps anterior to the reign of Francis I.

The first watches made in France are of a cylindrical form; the case, rather thick, is enriched with arabesques chased and perforated. At Nuremberg, on the other hand, they received

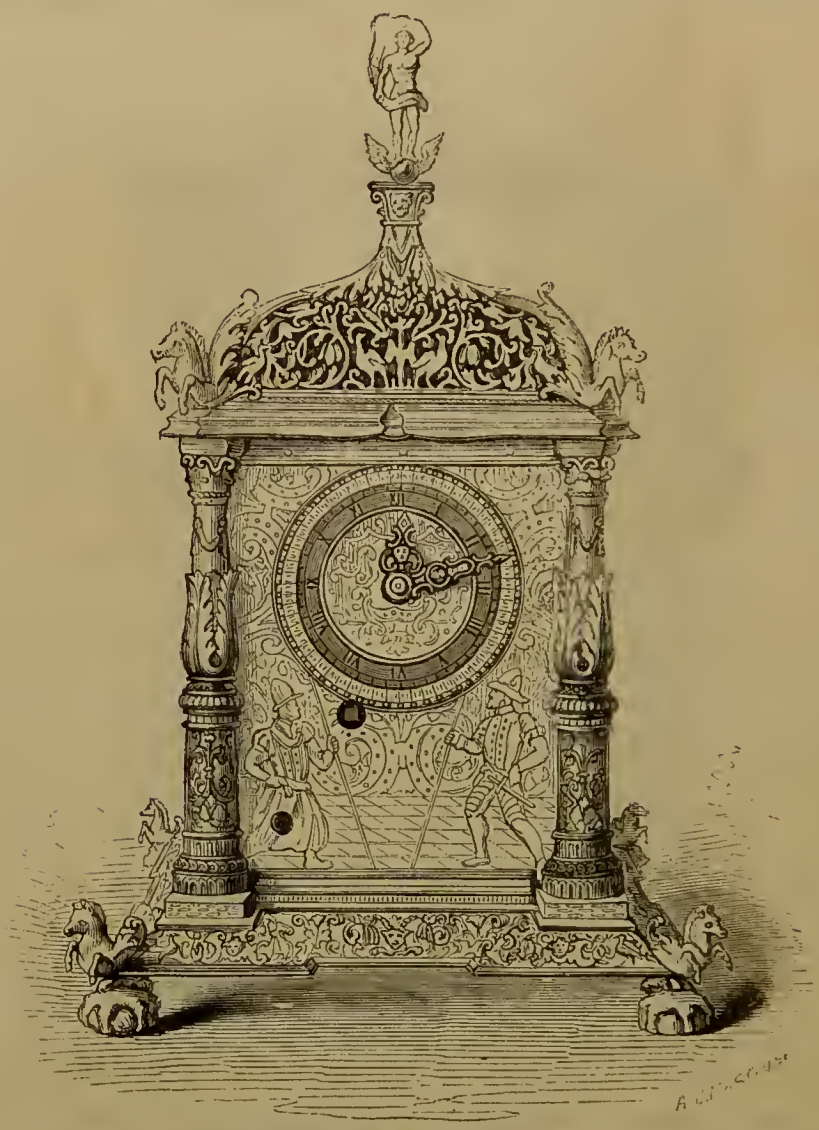


Fig. 163. Metal-gilt watch, chased and engraved. Coll. Bernal.

an ovoid form, which obtained for them the name of "Nuremberg eggs." According to Panciroli, Myrmécide, from the very beginning, made them the size of an almond.

It may be easily conceived that in early times the fortunate possessors of watches were anxious to see the working of the mechanism. Accordingly, the clockmakers arranged them, before long, in cases of rock crystal, to which they endea-

voured to give graceful forms. Jolly and Sennebier, clockmakers of Paris, were the first to make them in the form of a cross (Fig. 164); octagonal were made by Bouhier, a skilful clockmaker of Lyons.

In the succeeding half of the XVIth century, when the

Fig. 164. Watch of an Abbess in the form of a pectoral cross. In rock-crystal mounted in copper-gilt. French. XVIth century. Coll. Soltykoff.

Fig. 165. Octagonal watch-case, composed of plates of nielloed silver, with portrait of Petrarch's Laura.

mechanism of watches no longer excited curiosity, the makers enclosed them in cases of silver of various forms, enriched with fine engravings and nielli (Fig. 165). Not a few of the engravers of that period, known by the name of the "petits maîtres," among whom are Etienne de Laulne and de Blondus, have published exquisite prints, representing designs on watches.

The silver, as well as the rock-crystal watch-cases, were made in the greatest variety of form until Louis XIII. It was at this period that the clockmakers generally adopted the circular form, more or less flattened, which has been followed, to the present time. Enamel painting, in the style of Toutin, was well adapted, by the finish of its execution, to the ornamentation of watch-cases; this kind of decoration was frequently employed under Louis XIII. and Louis XIV., and these fine paintings, encircled by precious stones, have made of the watches of that period jewels of high price.

In 1657, Hughens, the celebrated mathematician, brought great modifications in the art of clock-making, by applying the pendulum to clocks, in order to regulate the movement; and adapting, some years later, to the balance of watches a spring, which produced upon this balance the same effect as that of the weight upon the pendulum. But further details upon this mechanical department of the art of clock-making would lead us away from our subject.

CHAPTER XIII.

ECCLESIASTICAL AND DOMESTIC FURNITURE.

§ I. ECCLESIASTICAL FURNITURE.

In treating of the arts of the goldsmith and enameller, we have already had occasion to notice the most interesting pieces of ecclesiastical plate, namely, sacred vessels and reliquaries, and when treating of sculpture we have alluded to that branch of the art as applied to the decoration of churches; the present section on ecclesiastical furniture will contain notices of a few objects which could not with propriety be classed under either of the preceding heads (Fig. 166). These are principally domestic altars or monuments inviting to prayer, which in the middle ages had a place in private apartments; portable altars for celebrating mass out of the church;* and that curious kind of pastoral staff called, from its form, a Tau.

Fig. 166. Iron alms-box. St. George's Chapel, Windsor. XVth century.

Portable altars are mentioned in councils and charters under the several denominations of Altare viaticum, portatile, gestatorium, lapis portatilis, altaria itineraria. These sacred stones were principally used by bishops and abbots when travelling, and were placed upon tables or stands for the celebration of divine service. It is mentioned in the life of

* One in silver was found in the coffin with the body of St. Cuthbert when his

St. Gérard, abbot of Braine-le-Comte, who lived in the Xth century, that when he left St. Denis to go to his new appointment he carried away the itinerary altar which St. Denis, it was said, had used in his lifetime. There is a magnificent portable altar of probably the XIIth century, in the Riche Chapelle of the palace of the King of Bavaria, two in the Church of Conques (Aveyron), and one at the Benedictine Convent of Namur.

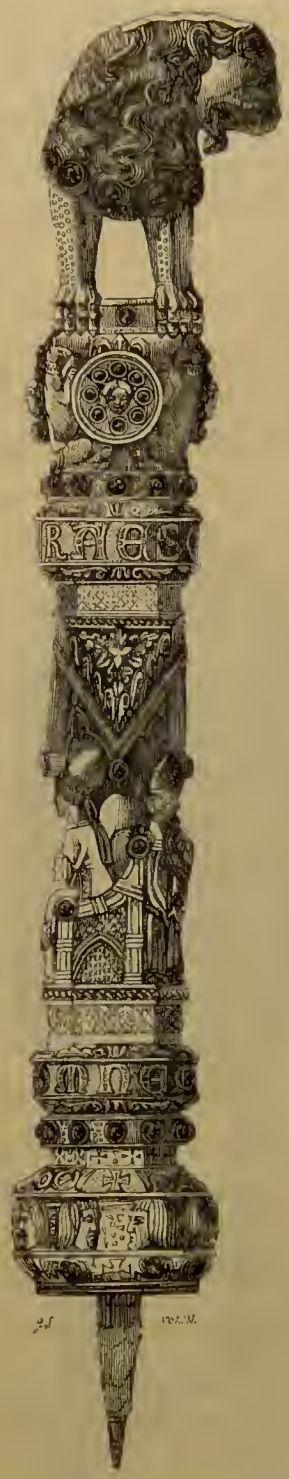


Fig. 167. Tau, or pastoral staff. XIIth century. Coll. Soltykoff.

With respect to the Tau, or pastoral staff, of which we give (Fig. 167) an interesting example. In the first centuries of the middle ages, the crosiers were generally short and simple in their form and decoration; they resembled either a simple cane with a knob at the end; which was the *baculus pastoralis;* or else they were in the form of a crutch which gave the name of Tau to those of this kind. After the XIIth century the crosiers increased in height and ornamentation, but the abbots retained the Tau, as a symbol of their authority, long after the bishops, and it remained the principal attribute of the abbots of the order of St. Anthony. In some German painted glass of the XVth century, (Fig. 27, page 74,) is a painting of St. Anthony, represented holding in his hand a Tau raised over his head as a crosier, and in the tomb of Morand, Abbot of Saint Germain-des-Prés in 990, was found a Tau about 6 feet long, apparently of hazel wood; the cross-piece of ivory carved in perforated work was fixed to the stem by a kind of copper ferule of similar workmanship.

grave was opened in 1827. A papal license seems to have been necessary to entitle anyone to have a portable altar.

§ II. FURNITURE FOR DOMESTIC USE.

In the first centuries of the middle ages.

Of all the monuments of domestic life belonging to the middle ages, household furniture is the rarest; scarcely any can now be met with. It is only from the miniatures of manuscripts and a few sculptured bas-reliefs, that any idea can be gathered of the forms or ornamentation of furniture prior to the XVth century. From the Xth century until towards the middle of the XIVth, the illustrations given in manuscripts are of very little assistance, as, during all that period, the figures and subjects are generally painted on a gold or mosaic ground. The introduction of furniture was very rare until artists had become practised in perspective, and were able to give to the background of their compositions a depth which admitted of their representing interiors. The writings of old authors and the ancient inventories would doubtless furnish valuable documents; but long and minute researches on this point are still wanting. We must therefore rest satisfied with imperfect notions and vague sketches of the period, extending from the beginning of the middle ages to nearly the middle of the XIVth century.

If any reliance may be placed upon the Greek manuscripts of the IXth and Xth centuries, the decoration of furniture in the Empire of the East must have been of extraordinary richness.* The thrones, seats, beds, represented in these manuscripts, are decorated with gildings and incrustations, and the brilliant tissues which partially cover them are themselves enriched with jewels. But great as may have been the magnificence of the Eastern emperors at that period, much allowance must be doubtless made for the imagination of the painter by whom this furniture has been depicted. In other respects there is little to admire, the forms are heavy and ungraceful, and purity of taste is entirely sacrificed to richness of ornamentation.

In the West, until the XIIth century, the character of the

* Bibl. roy. MS. lat. no. 5; MS. grec. no. 510, executed for Basil the Macedonian; MS. fonds Coislin, no. 79.

furniture is massive. (Fig. 168.) The thrones and seats assume an architectural style. We often find them decorated

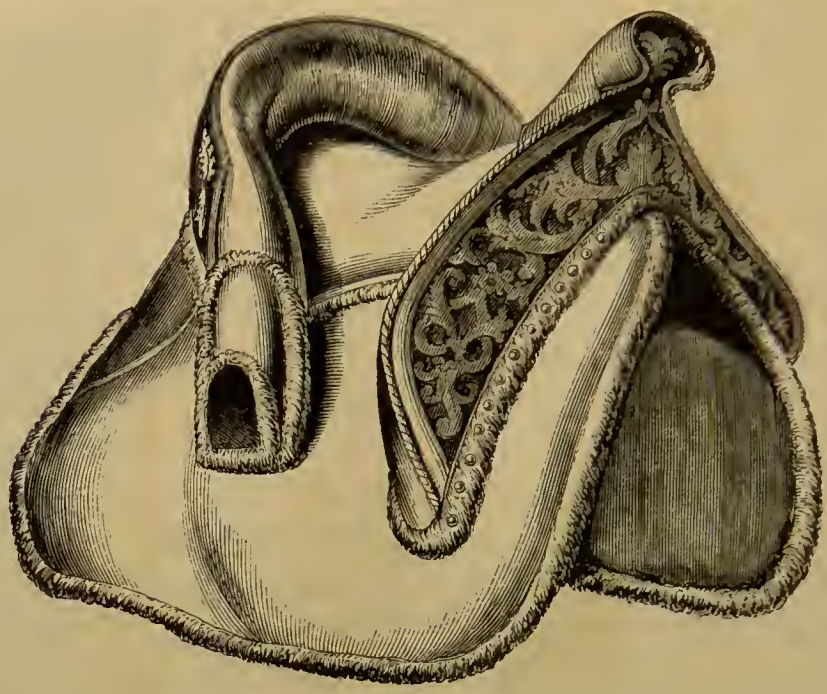


Fig. 168. Saddle of the Cid. XIth century. Royal armoury, Madrid.

with several tiers of arcades.* The seats, until the XIIth century, and often even later, are almost always furnished with a kind of cylindrical cushion, made of some textile fabric.

In the XIIth century, the manufacture of furniture partook naturally of the growing improvements in all the arts of design; the seats, beds, and other furniture, although still preserving something of their architectural character, began to assume more elegant and varied forms.† Wood turned with the lathe was now generally used in making seats. From this early period, ornamental furniture is decorated with both paintings and sculptures. (Fig. 169.) Theophilus tells us in the 22nd chapter of first book of his "Diversarum artium schedula," that not satisfied with decorating the smooth parts of sculptured furniture with a coat of colour, they painted upon it figures,

In the XIIth, XIIIth and XIVth centuries.

* Bibl. roy. MS. fonds Saint-Germain, no. 30.

† Bas-relief of the cathedral of Chartres.—Bibl. de Strasburgh, MS. *Hortus delicarum*.—Willemin, *Mon. franç. inéd.*, pls. lxxiv., lxxvii.

animals, foliage, ornaments of every time, and that paintings were sometimes done upon a gold ground.

This description of decoration continued for a long

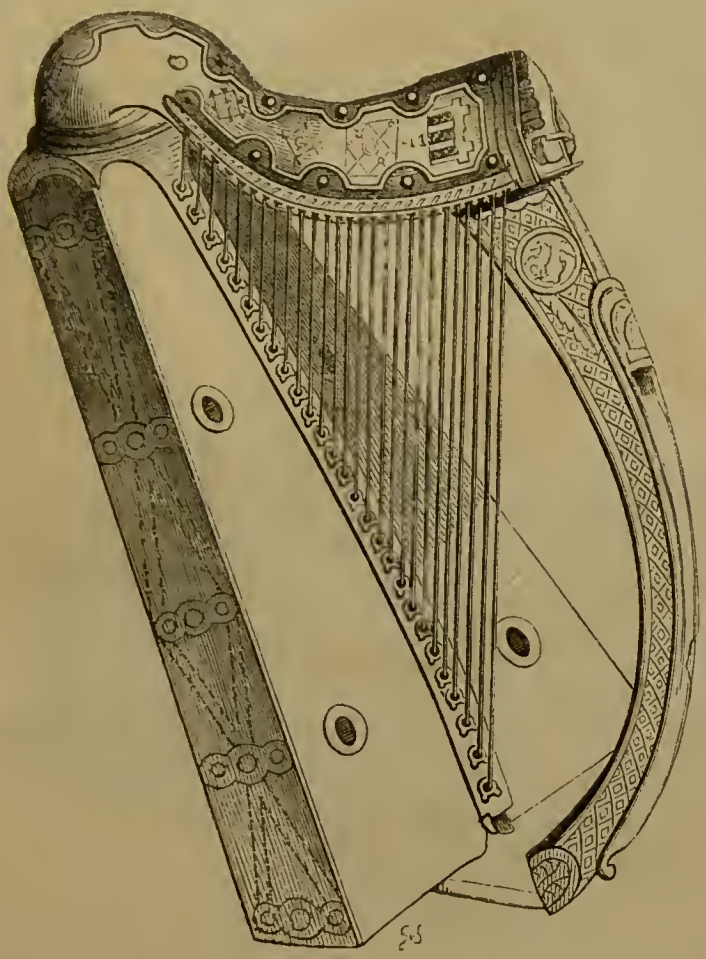


Fig. 169. Irish Harp. Museum of the Irish Academy. Dublin.

time, particularly in Italy, where painting, towards the XIIIth century had risen into high repute, and was now preparing for the glorious epoch of the Renaissance. In the XIVth century it was more in fashion than ever. At this period it was customary to have in houses large coffers enriched with carvings, the interior of which were lined with silk, and which served to contain clothes and valuables. On the panels of this kind of chest (*bahut*) were painted armorial

bearings, as well as subjects taken from Scripture, from history and from fable. The beds and seats received similar paintings.* The artisan who made these pieces of furniture ranked among the artists. In 1343, the painters having founded at Florence a society entitled the Society of St. Luke, admitted among its members the decorative artists who worked in wood and metal. The Society of painters at Venice reckoned among its members casket-makers, gilders and varnishers; that of Bologna had admitted even sadlers and sheath-makers. At a later period all these artisans could

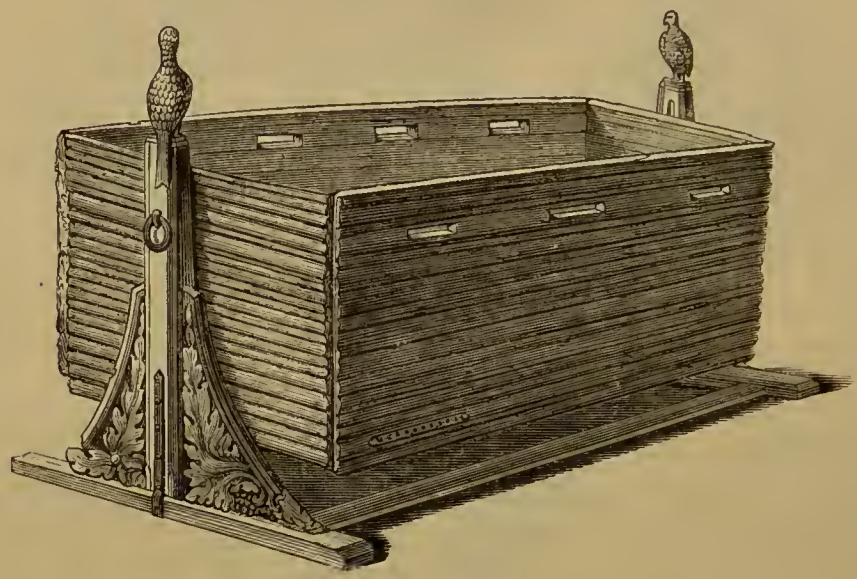


Fig. 170. Cradle of Henry V., preserved in the Castle, Monmouth.

only be compelled to leave the Society of painters by means of law-suits and political proceedings. At the end of the XIVth century, and in the first years of the XVth, Dello, a Florentine painter of merit († 1421), was solely occupied for a considerable period in painting caskets, seats, beds, and other furniture, for which he had acquired so great a reputation as to lead to his amassing a considerable fortune.†

Marquetry, which derives its origin from the imitation of the process of mosaic, of which it seeks to produce the effect with wood of different colours, ivory and other materials, was applied in Italy from the XIIth century to the decoration of furniture. It was much in fashion in that country, particu-

* Vasari, Life of Dello; Lanzi, *Histoire de la peinture en Italie.*
† Vasari, *Life of Dello.*

larly in Venice. It is true, that until towards the end of the XIVth century, the artists in marquetry produced nothing but ornaments composed of black and white woods,* with which they sometimes mixed ivory; yet the finish and precision of the patterns, make this primitive marquetry a very effective decoration. This art, as will be shown hereafter, was subsequently ranked in Italy among the arts of design.

In France, in the XIVth century, the principal decoration of ornamental furniture consisted in tissues embroidered in silk. From the XIth century, France had distinguished herself in the industrial arts by the manufacture of tapestry. In 1025, there was a manufactory of tapestry at Poitiers, to which the Italian prelates sent their orders; † in the XIIth century, the manufacturers of Saint Florent de Saumur ‡ and those of Aquitaine had already progressed considerably; lastly, in the XIVth, the rich fabrics of the looms of Artois and Flanders had gained a high reputation. It will readily be conceived that the success of those splendid manufactures would soon cause their productions to supersede the paintings spoken of by Theophilus.

The inventory of Charles V. shows that the wardrobe of this prince contained hangings embroidered with historical subjects, used to cover the furniture of his chapel and his apartments.§ Thus, among other subjects belonging to his chapel, we find described, fol. 110: "La grant chapelle, qui est de camocas d' oultremer, brodée à ymages de plusieurs ystoires, et sont les ymages et les orfroiz pourfillez de perles; en laquelle a frontis, dossiers, couverture de chayère à prelat, &c.;" and further on, fol. 120, mention is made of a great number of "ciels et dossiers à tendre." In the apartment of the prince, we find enumerated, at fol. 302, and following, besides, "des tapiz velus, tapisseries d' armoiries, carraulx, coultes pointes, oreillers, couvertoers fourrez d' ermines et de menu vair, courtines et pavillons de broderies qui se tendent à bastons à façon de voultes an dessus du lit du roy, quand il est couché;" every thing in short necessary to cover the

* Lanzi, t. iii. p. 84.

† *Lettre de Guillaume V., comte de Poitou, à l'évêque de Vercell*, in D. Bouquet, t. x. p. 454.

‡ Du Sommerard, *Les arts au moyen âge*, t. iii. p. 311.

§ MS. Bibl. roy. no. 8356.

seats, to decorate them, and make them comfortable. These are *dossiers* and *banquiers*, *ciels de dossiers*, and *coultes pointes de banquiers*. The greater part of these stuffs are *à ymages*, and the taste of the subjects represented is quite in keeping with that of the pieces of metal-work which have already been described. The figures are often grotesque, as for instance, two little pillows "brodez à bestes sauvaiges, qui ont testes d' hommes armez."

In the XVth and XVIth centuries.

We have before mentioned how greatly carving in wood had improved at the beginning of the XVth century; the decoration of household furniture partook naturally of the prevailing taste; and sculpture was substituted for every other kind of decoration. (Fig. 170.) A good many pieces of furniture of the XVth century are still in good preservation; and were specimens wanting, the manuscripts with miniatures of that period would supply the deficiency. To date from the XVth century, the miniature painter completely gave up the gold or mosaic back-grounds of preceding centuries, and replaced them with

Fig. 171. Lid of a casket ornamented with bas-reliefs in stag's horn, perforated and laid on on a red morocco ground. XIVth century.

landscapes or interiors artistically arranged; and according to their custom they faithfully depicted the furniture at that time in use, in the same way that they gave to the figures a contemporaneous costume. Thus we find in the manuscripts

of this period many representations of bed-rooms and studies with all the furniture belonging to them. There are in the bed-rooms, the curtained bed, with corniced tester, and its coverlid (*couvertoer*,) the chair (*chayère*) by the side of the bed, the devotional picture or the little domestic altar appended to the wall, the *buffet*, and a number of other small pieces of furniture. In the study, the high chayère or faldstool *(faldistoire)* with high back, the revolving reading-desk, called *à roue*, upon which the books could be made to pass under the eye, and could be consulted in turn without moving, and various kinds of desks for writing.

The carved parts of the furniture of the XVth century represented almost invariably the most elegant and complicated disposition of the architectural ornaments pertaining to the period. (Fig. 171.) The textile fabrics are no longer employed upon the seats, except on those parts where they cannot be dispensed with; at times a canopy of tapestry still surmounts the principal chayère; but, in general, the wood is left as uncovered as possible to admit of its being loaded with carved ornaments. The beds even, while retaining the curtains which covered them in the XIVth century, almost always show the head of the bed enriched with perforated ornaments, and carved with that intricacy of detail, and at the same time with that elegance, which form the characteristics of the florid Gothic style.

The taste for furniture of carved wood continued to prevail in France throughout the whole of the XVIth century. From the end of the XVth century the artists had introduced figures and bas-reliefs in the midst of the gothic architectural decorations. In the XVIth century these decorations were abandoned and the furniture covered with bas-reliefs, and even with figures in full or high relief stamped with all the purity of design belonging to that period. If on some occasions architectural ornaments form a frame-work to this fine sculpture, they are always borrowed from the Italian architecture of the Renaissance. In the last quarter of the XVIth century the mania for luxury and display of every kind, led the sculptors of furniture into all sorts of exaggeration. In their efforts after magnificence they lavished ornaments without measure; the panels were

completely covered with masks, terminal or hybrid figures, and arabesques, so as scarcely leaving any field for bringing out the details of these exaggerated compositions.

Italy had also, in the XVth and XVIth centuries, sculptors of wood who applied themselves to the decoration of furniture. Giuliano, son of Baccio D'Agnolo, and his brothers, Filippino and Domenico were, towards the middle of the XVIth century, the most talented sculptors of furniture in Tuscany. Although associated with Baccio Bandinelli in the execution of great architectural works, Giuliano did not close his workshop for carved furniture, and produced numerous specimens of carved wood-work, which Vasari extols.*

It was especially in the application of marquetry to the decoration of furniture that the Italians excelled. From the beginning of the XVth century, the processes of marquetry (*tarsiatura*) had undergone a marked improvement, and its artists had succeeded, by the aid of penetrating oils, and of colours boiled in water, in staining the woods with tints sufficiently varied to imitate the foliage of trees, the clearness of water, and to produce the degradation of tones and the effects of distance. Vasari cites, among the most skilful artists in the marquetry of the XVth century,† Giuliano da Maiano († about 1460), Giusto and Minore who assisted him in his works, Guido del Servellino and Domenico di Marietto, his pupils, Benedetto da Maiano, his nephew († 1498), who had also carved in wood, Baccio Cellini, and Girolamo della Cecca. In the XVIth century must be named among the most celebrated, Fra Giovanni da Verona, Fra Raffaelle da Brescia, Fra Damiano da Bergamo, and Bartolommeo da Pola.

This style of decoration was chiefly applied to the stalls and benches of churches, and the wardrobes of sacristies. Household furniture was also thus decorated, and particularly those large coffers we have mentioned already, which found a place in the apartments of rich persons. This furniture was so esteemed, that foreign princes ordered it from Italy. Vasari relates that Benedetto da Maiano made, for Mathias

* Vasari, *Life of Baccio d'Agnolo.*
† Ibid. *Life of Giuliano* and *Benedetto da Maiano.* Verona.

Corvinus, two magnificent coffers in marquetry, which he himself went with to Hungary.

But, without doubt, the most sumptuous of all the ornamental furniture produced in the XVIth century by the Italian manufactures, were the tables, toilets, and boxes in iron, damascened in gold and silver, of which we have had occasion to speak in treating of the art of damascening. (Fig. 172.)

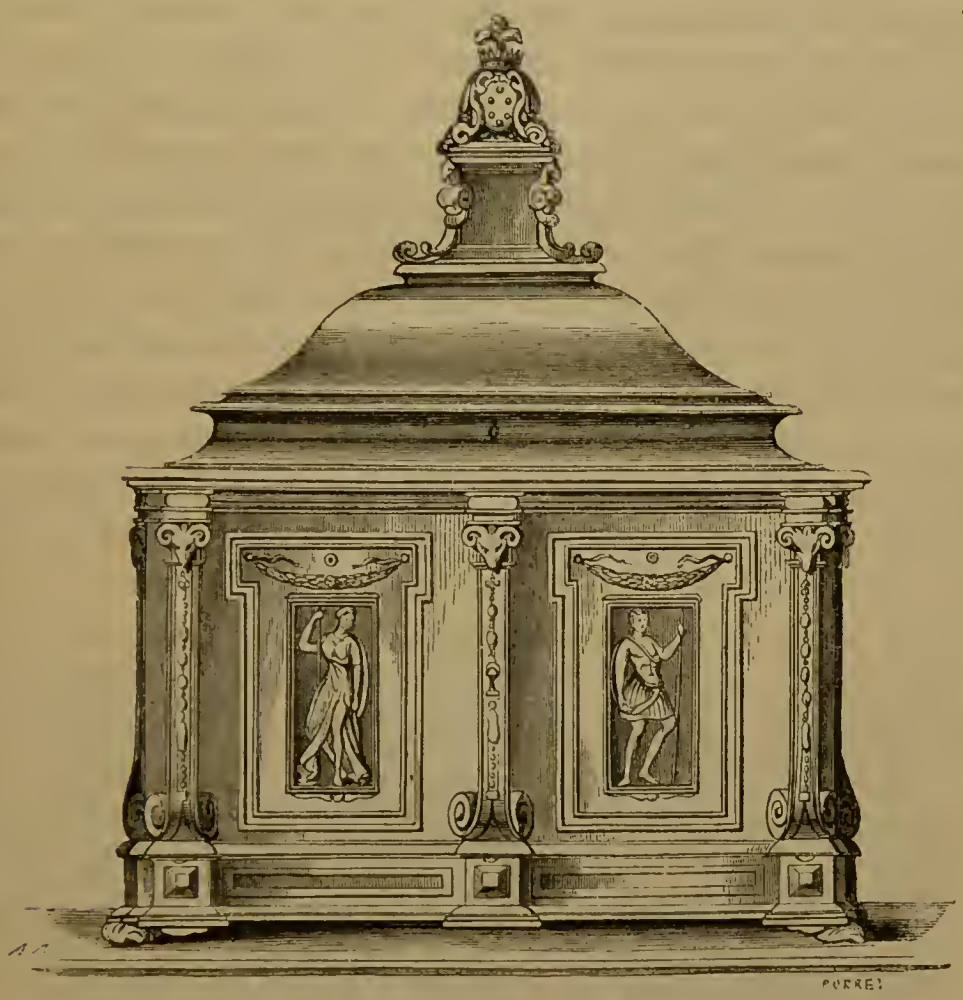


Fig. 172. Chased steel casket. Italian work of XVIIth century.

Cabinets of the XVIth and XVIIth centuries.

In the second half of the XVIth, and in the XVIIth centuries, a kind of furniture was made in Germany, which received in that country the name of "Kunstschrank," (a compound word signifying Art-cabinet,) and now designated as "cabinet." This piece of furniture is, in fact, a kind of armoire or small chest, according to its dimensions, which is furnished with a large number of drawers and compartments. Its façade almost always assumes some architectural arrangement.

The making of this kind of furniture belonged in general to the cabinet-maker, but artists of every class contributed to its decoration. We sometimes meet with a cabinet which has served to exercise the talents of the painter, the sculptor, the goldsmith, the engravers on metal and on precious stones, the enameller, and the artists in mosaic and in marquetry. Valuable woods, ivory, tortoiseshell, amber, mother-of-pearl, metals, and hard stones, are employed in their decoration. The ornamentation most usually consists of carvings in ivory and silver, statuettes, and bas-reliefs, in slabs of ivory, enriched with a fine engraving, the lines of which are blackened, producing a similar effect to that of niello melted into the incisures of a silver plate that has been previously engraved with the burin. Nor is the interior of these cabinets less carefully decorated than the exterior. The principal panel, when opened, exhibits generally the peristyle of an edifice, adorned with columns, balustrades, and statuettes, all multiplied by mirrors at the back. The manufacture of this splendid ornamental furniture was carried on at Nuremberg, Dresden, but especially Augsburg, where flourished such

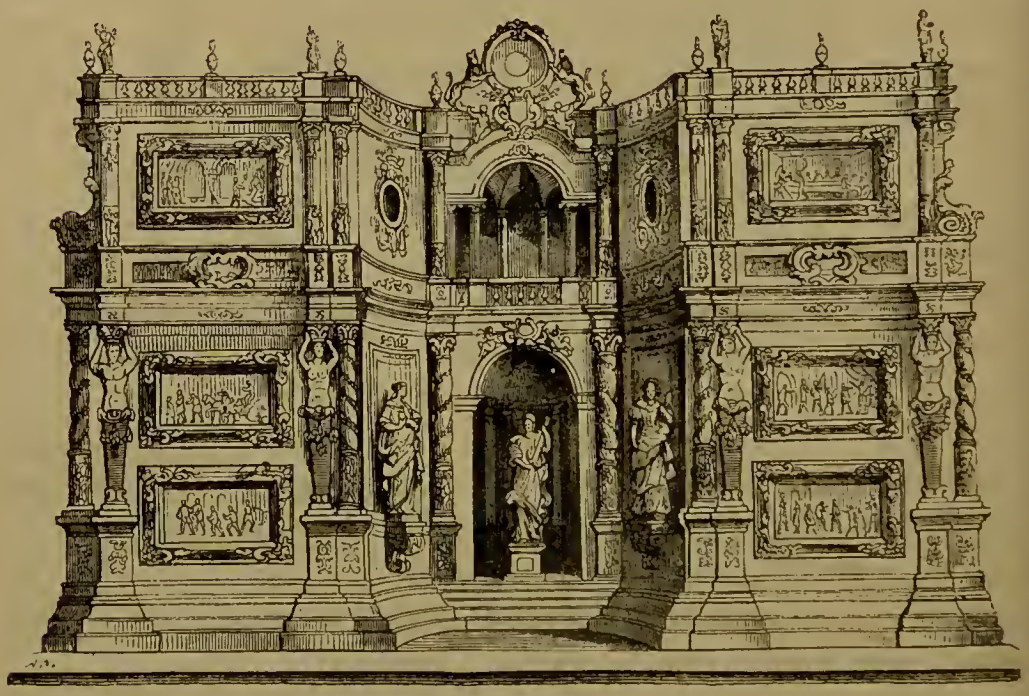


Fig. 173. Tortoiseshell cabinet. Flemish. XVIIth century.

skilful ivory sculptors, and such celebrated goldsmiths. All the German goldsmiths of the XVIth and XVIIth centuries

whom we have already named in treating of the goldsmith's art, worked at bas-reliefs and statuettes for cabinets, and the pieces of sculptured metal-work now existing have mostly been taken out of furniture of this description. The museums of Germany contain a large number of these cabinets, upon some of which may be read the names of the artists by whom they were made and decorated.

Among many other fine specimens preserved in the Museum of Dresden, we remarked one most beautifully executed, which bears the name of Hans Schieferstein, of Dresden, and is ornamented with figures and bas-reliefs of ivory, and fine engravings upon slabs of the same material. A desk, which accompanies this cabinet, is dated 1568. Another ebony cabinet, decorated with little silver figures in alto-relievo, and with fine perforated ornaments, is signed with the name of Kellerthaler, a celebrated goldsmith of Nuremberg, and dated 1585.

The master-piece of this species of furniture, if not for purity of style, at least for richness of ornament and complicated details of workmanship, is in the Chamber of Arts of Berlin. It is a cabinet, known by the name of the *Pommersche Kunstschrank*, which was made at Augsburg, in 1616, for the Duke of Pomerania, Philip II. Philipp Hainhofer (1578 † 1647) painter and architect, an eminent artist and virtuoso, who exercised a great influence over the artists of his time, both furnished the design of this cabinet and directed the execution. The principal part of the work was done by Ulrich Baumgartner, a celebrated cabinet-maker, whose name appears in the centre of the cabinet, with the date 1615, and accompanied by this device—*Ehe veracht als gemacht*—(Sooner despised than made).* It would occupy too much time to describe this piece of furniture; suffice to say, that twenty-five artists, whose names are all known, have contributed to its decoration: three painters, one sculptor, one painter in enamel, six goldsmiths, two clock-makers, one organ-maker, one mechanician, one modeller in wax, one cabinet-maker, one engraver upon metal, one engraver upon precious stones, one turner, two locksmiths,

* Kugler, *Beschreibung der Kunstkammer*, S. 178.

one binder, and two sheath-makers. An idea may be formed, from this enumeration, of all the variety of ornament with which this cabinet is decorated. We also find upon it Limoges enamels.

Hainhofer and Baumgartner united their talents in composing other cabinets of equal richness, among the most important of which, is one in the library of the University of Upsal. Among the most celebrated cabinet-makers of the same time, must be mentioned Hans Schwanhard († 1621), inventor of these undulating pieces of ebony which are introduced with such good effect in the decoration of ebony armoires, cabinets, and frames.*

At the end of the XVIth and in the XVIIth centuries, cabinets of different forms were also made in Italy, France, and Flanders. The richest of those made in Italy are mostly decorated with fine materials, jaspers, agates, lapis-lazuli, and mosaics of hard stones, placed on an ebony or tortoise-shell ground. (Fig. 173.) The Musée de Cluny contains a very fine Italian cabinet, one of the most complete specimens of the richness of ornament lavished in the XVIIth century upon works of this description. Nor did the Italian artists give up the style of ornamentation which had proved to Dello the source of so large a fortune. In the XVIth and XVIIth centuries, cabinets and other pieces of furniture were made in Italy, with panels enriched with painted subjects.

In Flanders, there were, in the end of the XVIth century, and especially in the XVIIth, carvers in ivory of great merit, and the cabinets of that century were in consequence principally decorated with statuettes, bas-reliefs, and ornaments in ivory.

At the same period were made cabinets entirely of ebony, of rather large dimensions, especially in France and Germany. These pieces, which are often decorated in the best architectural style of the period, are enriched with detached figures and bas-reliefs. One of the finest specimens of this class was in the collection of M. Baron; it has been published by M. du Sommerard.†

* Leopold von Ledebur, *Leitfader für die Köngl. Kunstkammer*, S. 79.
† Album 2e série, pl. xxii.

In the second half of the XVIIth century, the taste for luxury caused the different kinds of ornament we have been describing to give place to incrustations of copper and tin, upon a ground of tortoiseshell. These two metals, perforated and combined, so as to form figures and subjects, were slightly engraved with the burin, by which means the artist rendered the shading and interior details of the pattern. Carvings in gilded wood, or in bronze, completed the decoration of this kind of furniture.

This style of decoration is certainly very rich and brilliant; but, considered as objects of art, these are very inferior to the pretty cabinets of the preceding periods. Boule, chief upholsterer to Louis XIV., was the cleverest of all the artists employed in making this kind of furniture, to which he has given his name.

§ III. DOMESTIC UTENSILS.

Very many of the objects already referred to are, in fact, nothing more than domestic utensils, and those we are about to describe under this title might, with strict propriety, have been placed at the end of the chapter on sculpture, or the different industrial arts of which we have been treating. Yet some appeared hardly of sufficient importance to be reckoned as pieces of sculpture, and others have received décorations from two different arts; lastly, the use of many is of too marked a character to admit of our treating them otherwise than as a separate class.

Among all these objects, the most curious are the combs. These received, during the middle ages, a rich ornamentation. The oldest, which are in ivory, appear to come from the Greek empire; for we recognise the Oriental style in the carvings and incrustations with which they are often covered. Mediæval ivory combs.

Other ivory combs, also rather scarce, are of western manufacture. There are specimens to be seen which must have been made as far back as the XIth and XIIth centuries. The treasuries of churches contain some belonging to the early period, which were used at the toilet of the bishops. In the Cathedral of Sens, particularly, is a very curious example,

supposed to have belonged to Saint Loup.* The most common are those of the XIIth, and particularly of the XIVth centuries. The subjects of the bas-reliefs with which they are ornamented, are taken from the romances of the time.

Wooden combs of the XIVth, XVth, and XVIth centuries.

The combs most frequently met with are in wood. The decorations consist of fine pierced work, the patterns, of great delicacy, are in the arabesque style; some are, besides, enriched with marquetry of stained ivory. But the greater number of wooden combs are without marquetry, and bear devices in old French and in Flemish. It may, therefore, be inferred that this kind of comb, first executed in Italy, was imitated

Fig 174. Ewer of brass, circ., 1300, found in the North Tyne River, near Hexham. British Museum.

in a manufactory established in France, in the neighbourhood

* This comb, which forms part of the treasure of the Cathedral of Sens, is ornamented with occidental stones and with figures of animals. In the middle is the inscription, "Pecten Sancti Lupi." Formerly the priests not only washed their hands before mass, but they also combed their hair. Hence combs are so often found among the treasures of churches.

of Flanders. This manufactory also produced pretty letter-boxes, pierced in open work like the combs.

The most ancient productions of this manufacture appear to go back to the XIVth century; it existed as late as the second half of the XVIth, a proof of which is to be found in a letter-box in the collection of the Louvre; the shield of France is carved on this box, with this motto—"Vive le roi Charles!" Two little figures underneath indicate, by their costume, the period of Charles IX.

Utensils of copper cast and chased.

German art supplies us with some domestic utensils of great interest, from their antiquity, and the beauty of their workmanship. These are lamp-holders, flambeaux, and vessels of various sorts, particularly water-fountains. These pieces are cast in copper, and afterwards finished off by chasing; they come from a manufactory presumed to have existed in Swabia, probably at Augsburg,

Fig. 175. Ewer of brass of the XIIIth century, from the collection of M. Duguet of Paris. British Museum.

which was always distinguished for its works in metal. This manufactory, the origin of which goes back to the XIth century, has principally diffused its works over Germany and

Flanders; they were much in fashion in the XVth and XVIth centuries; we find them often represented in the pictures of the German and Flemish masters of that period. What gives to these utensils the character of works of art is their being generally found in the form of animals or human figures; the execution, though often coarse and savouring of the work of the manufacturer, bears always a great stamp of originality. (Figs. 174, 175.)

The collection of M. Carrand contains two very curious examples of this class. They are ewers, one represents a knight covered with the mail armour of the warriors of the XIIIth century, his head protected by a helmet of great elegance, and he is mounted upon a war-horse. The other represents an equestrian figure of the young Conradin, the unfortunate competitor of Charles of Anjou. The prince has his head bare, encircled with a crown of flowers, like that given to the martyrs by the Italians of the middle ages; his body is encased in the armour of the time.

These bronzes, which are cast and chased, must not be confounded with the productions of the brazier, which were obtained by the process of hammering out.

Table utensils.

Table utensils, such as knives and forks, participated in the elegant decoration which the artists of the Renaissance bestowed on objects designed for the commonest use. The handles, in metal, amber, ivory, iron, chased and carved, represented little figures and ornaments of a good style and finished execution. Spoons, also, are often to be seen entirely of carved ivory. These spoons, as may be supposed, could not have been habitually used at table. The priests belonging to the mendicant orders, had recourse to them when they went out to partake of the hospitalities of the rich, in whose houses they would find the table utensils to be only of gold or silver, which they, by their monastic rules, were prohibited from using. These pretty spoons were enclosed in cases to protect them from injury.

PART II.

ORIENTAL ART.

CHAPTER XIV.

The continent of Asia was peopled at an earlier period than any other portion of the old world; from this quarter dawned the first light of civilisation, and the powerful nations of the east were governed by laws, and cultivated the arts, when Europe was as yet uninhabited. The study of Asiatic antiquities would be, therefore, one of the most interesting and instructive to which the human mind could apply itself; but the knowledge hitherto acquired of the origin, development, and vicissitudes of art among the people of Asia, is very limited indeed, and far from being able to give even a sketch of the industrial arts of the East, we must for the present confine ourselves to a few vague ideas concerning those branches which are applied to the decoration of domestic furniture.

Sculpture.

Oriental sculpture shows great imperfection in everything relating to the representation of the human figure. This proceeds chiefly, among the Chinese and Indians, from an invincible repugnance to anatomical studies, and among the Moslem, from religious dogmas prohibiting the representation of animal life. Yet, the delicacy of their carving, and the finished execution of their works of art, entitle them to examination, and even to comparison with the productions of our own more learned schools.

The Chinese often succeed in giving tolerable proportions and graceful attitudes to the human figure, when draped and of small size. (Fig. 176.) In fantastic figures, their compositions are remarkable for originality, and their representations of plants, fruits, and flowers, are executed with matchless precision. (Fig. 177.) Their carved ornaments are generally in good taste, and always of a finished execution.

Fig. 176. Bronze statuette of Lao-tseau, a Chinese philosopher. China.

To judge by their monumental remains, the ancient people of India would appear to have cultivated sculpture with some success; but for many centuries this art has fallen into complete decline among the Indians, whose works are greatly inferior to those of the Chinese. Yet they know how to produce great variety and great richness of detail in the decorations of their domestic furniture. (Fig. 178.)

Painting.

The painting of the Orientals cannot be compared with that of Europeans. (Fig. 179.) Yet, perhaps, the defects of the Chinese painting (Fig. 180) have been too much exaggerated. True it is, that they offend in the grouping of their figures, and they understand neither the composition nor harmonious arrangement of a picture, but they nevertheless succeed very fairly in rendering an indi-

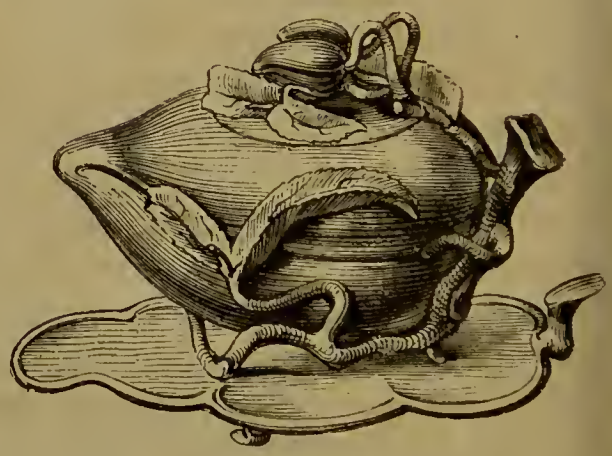


Fig. 177. Bronze incense burner. China.

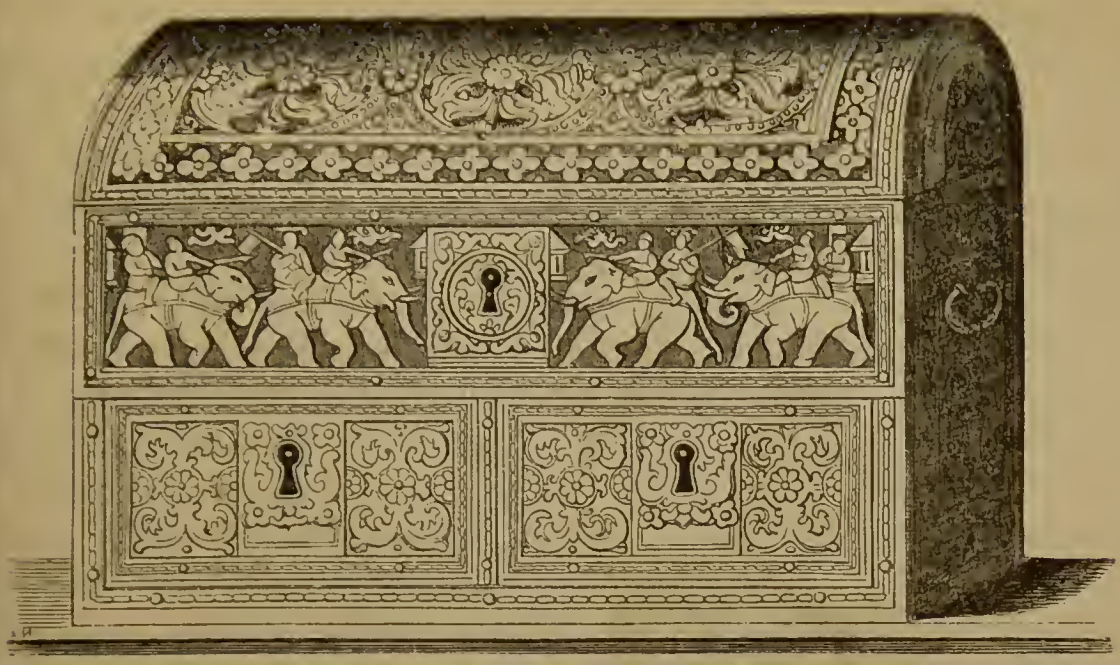


Fig. 178. Ivory casket. Hindoo carving.

vidual object. Nor must it be thought that they are completely

Fig. 179. Rama and Sita, Hindoo divinities, seated on a throne. Musicians playing before them. Hindoo drawing in body colours.

ignorant of perspective; they are very well able, when they choose, to give several distances to their pictures. A capital fault in the Chinese painting, is the absence of shadow in the faces, the Chinese seeming to consider shades as accidents in nature, not to be transferred into a picture; since doing so deprives it of uniformity of colouring, as well as detracts from its brilliancy. Thus we often meet, in the "tableaux de genre" * of the Chinese painters, flat figures in the midst of a tolerably well executed perspective.

Fig. 180. Body-colour painting on the leaf of a tree. China.

The Chinese also practise glass-painting; but we must not confound this painting in glass, or rather upon glass, with the art practised in Europe since the XIth century. In the Chinese pictures, the painting is not executed with vitreous colours fixed upon the surface of the glass and incorporated with it by the action of a high temperature. The glass here only fulfils the office of canvas, vellum, or wood. Oil colour is spread over one of the surfaces of the sheet of glass, which is covered over with a pasteboard, or piece of board to prevent the transmission of the light. This picture is shown upon the side which has not received the painting, and the glass thus seems, at the same time, both to give it a kind of varnish and to protect it against all external injury. These glass pictures have often no background; after the figures of the fore-

* This expression, for which we have no equivalent, has been adopted in our language to express those paintings which present common nature and private life, without aspiring to ideal and elevated subjects, to scenes of history, fable, or mythology. Our Wilkie, Teniers, and many of the Dutch school are "peintres de genre."

ground are painted, the glass is tinned over, which produces an unsatisfactory effect.

The Hindoo paintings are far inferior to the Chinese as works of art. The proportions of the human figure are rarely observed, and the principles of perspective are always strangely violated. We find in them neither light nor shade; the figures of the fore and background are of the same size. What distinguishes these paintings, is their exquisite execution and the beauty of their colouring; in fact, the Hindoo miniatures are of a finished delicacy and incomparable precision. Each figure is treated individually with the most minute details of costume. True, it is only a work of patience, yet it is not wanting in attractions.

The painting of miniature portraits is the only style in which the Indian painters succeed.

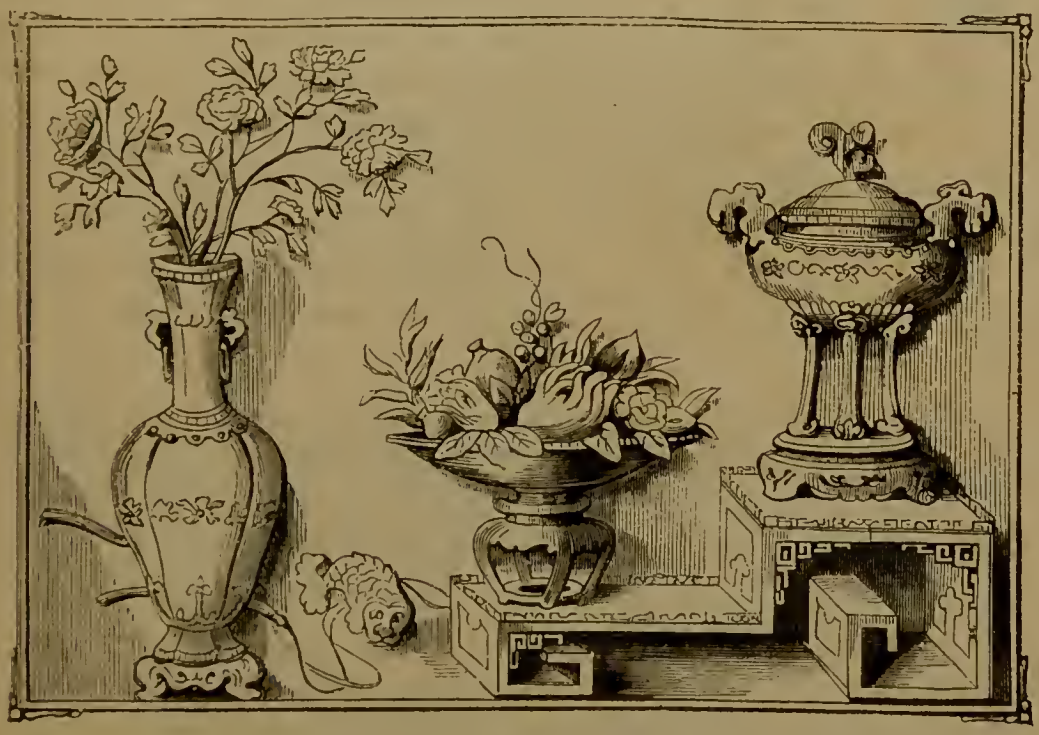


Fig. 181. Bas-relief executed in rice paste, bronze and rock-crystal; the flowers and fruit in coral, amber, chrysoprase, &c. China.

The Chinese excel in pictures of inlaid work. Hard stone, agalmatolite of different shades, ivory, various kinds of wood, and even bronze, enter into the composition of these singular mosaics in relief, which are always remarkable for taste and a delicate and careful execution (Figs. 181, 182).

Mosaic and Marquetry.

In marquetry, properly so called, the patience of the Indians has surpassed anything done in Europe.

The people of the East attach great value to fine writing, and calligraphy is one of the arts most esteemed among them (Figs. 183, 184). The Moslem have especially distinguished themselves by their beautiful works of this nature, and have carried the art to perfection. The Koran particularly has excited the emulation of the copyists of the East, a circumstance which gave rise to the remark of the philosopher Sadi, that the Koran had been sent to reform the conduct of men, and that men had only thought of embellishing its pages.*

Calligraphy.

Fig. 182. Bas-relief in agalmatolite, carved and perforated, and appliqué upon bamboo. China.

Many truly admirable manuscripts have been brought to us from the East; their margins are often decorated with

Fig. 183. From a Turkish MS. on vellum.

rich and brilliant miniatures; and if the Koran prohibits the representation of animated nature, the Moslem calligraphers compensate for this by the beauty of their delicate arabesques.

* M. Reinaud, *Monuments arabes, persans, et turcs, du cabinet de M. le duc de Blacas*, t. i. p. 26.

The ancient incrusted enamels from the East (Fig. 185) are executed by the cloisonné process, of which we have given a description in speaking of the cloisonné enamels of the Greeks of the Lower Empire and of the Italians.* The Chinese enamels particularly are perfect of their kind (Fig. 186). Yet the documents hitherto collected do not admit of our considering this perfection as an index that the art of enamelling upon metals had its birth in China. In fact, the manufacture of enamels is one

Enamels upon metals.

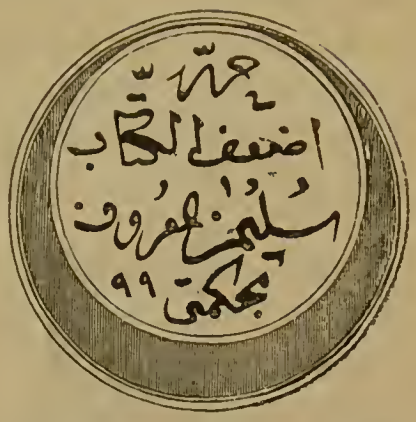


Fig. 184. From the same Turkish MS. as Fig. 183.

Fig. 185. Enamelled dish. Hindoo work.

of the branches of the art of vitrification, and we know that

* See above, p. 137.

the Chinese gave little attention to the manufacture of glass,* until perhaps within these last thirty years.† It was even very late, towards the middle of the Vth century of the Christian era, that they became acquainted with the art of staining glass with various colours, and were consequently enabled to make enamel with it. This appears from a document published by M. Pauthier in his *Histoire de la Chine*, which thus runs: "Sous le règne de Thaï-wou-ti de la dynastie des Weï (422 à 451 de notre ère), un marchant du pays des grands Youëtchi ou Scythes, vint à la cour de cet empereur, et promit de fabriquer en Chine le verre de différentes couleurs, que l'on recevait auparavant des pays occidentaux, et qu'on payait extrêmement cher. D'apres ses indications, on fit des recherches dans les montagnes, et on découvrit en effet les minéraux propres à cette fabrication. Le marchand parvint a faire du verre coloré de la plus grande beauté. Depuis ce temps le prix de la verrerie diminua considérablement à la Chine." ‡

Fig. 186. Ancient enamelled vase. China.

Who these *Youë-tchi* were whose name the translator has rendered by that of Scythians, we cannot exactly say. Ancient Scythia comprised an immense region extending over Asia and Europe. Scythia in Asia was divided into two parts by the Imaüs. Scythia beyond the Imaüs comprised the countries situated on the north of India and of Persia. This merchant, who thus imported into China the processes of the manufacture of enamel, could only come from the western countries where it was made. May it not thence be supposed that Persia, which is situated to the west of China,

* Du Halde, *Description de l'émpire de la Chine.* Paris, 1725, in fol. t. ii. p. 203.

† *Pièces et documents relatifs au commerce avec la Chine et l'Inde.* Paris, 1846, p. 266 and 441.

‡ M. Pauthier, *Chine, ou description de ce vaste empire*, p. 283.

was the country whence the Chinese derived their coloured glass anterior to the reign of Thaï-wou-ti?

Besides, there is no cause for astonishment that Persia should have been in the East the cradle of the art of enamelling upon metals. Phœnicia, which in early times had carried the art of vitrification to so high a degree of perfection, would naturally have transmitted its processes to Persia, when united to that empire by Darius, son of Hystaspes. When once the manufacture of glass was known, there needed but one step more to apply this beautiful material to the decoration of metals. At any rate it is certain that we find the art of enamelling in full activity in Persia in the reign of Chosroes (531 † 579). The fine cup of the Imperial Library at Paris, which is formed of translucid cloisonné enamels, in compartments of gold, and in the centre of which is the effigy of that prince,* is an example of the advanced state of the art of vitrification in Persia in the VIth century. These documents are not sufficient to decide the question of which we seek the solution, but they may be admitted as conjectures.

The taste for enamel decorations was long prevalent in Persia. Chardin, who made several tours in that country and lived there several times from 1644 to 1678, informs us that at that period the Persians enriched their arms with enamels incrusted with gold.

The lapidary's art

Asia being renowned for fine mineral productions, one may easily conceive that the lapidary's art would be cultivated there in all ages. China and India furnish vases of different forms. The most remarkable are those cut in jade, and which are brought from China. This fine stone is, of all pebbles, the hardest and heaviest; it strikes fire with steel; when reduced in thickness, it becomes semi-translucent; and is of a very fine grain. The great cohesion of its parts renders it susceptible of the most finished workmanship. Jade is of different colours; milk-white, green, gray, greenish gray, and gray shaded with yellow. It is found princially in China and is known there by the name *yu-che*.†

* Adrien de Longperier, *Annales du l'institut archéologique*, t. xv.
† Du Halde, work before quoted, t. i. p. 95, and t. ii. p. 13.

The jade stone is so hard, that it is worked with diamond powder. Yet, the works executed by the Chinese upon this

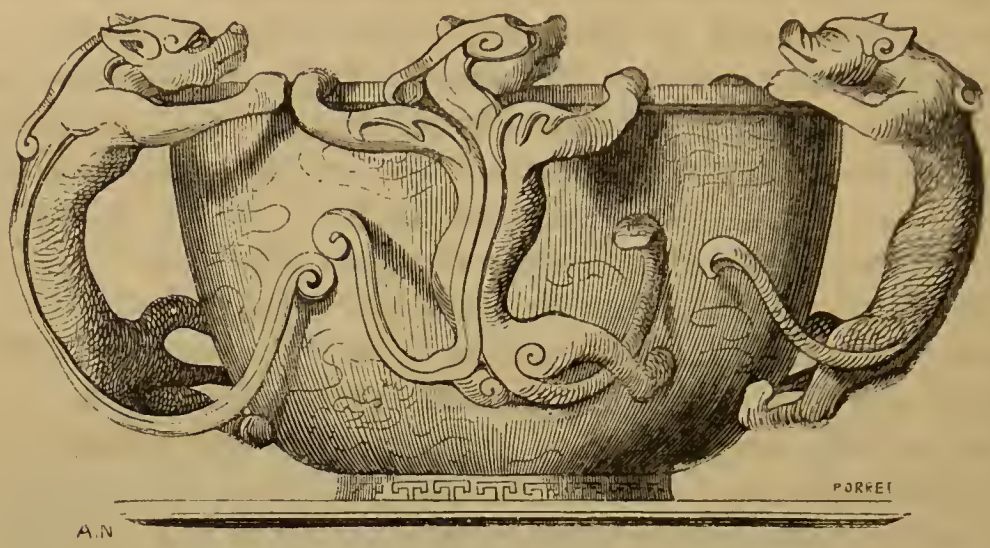


Fig. 187. Ancient cup of gray jade with kylins. China.

stone are very remarkable.* We give a specimen from the

Fig. 188. A Buddhist divinity of white agalmatolite. China.

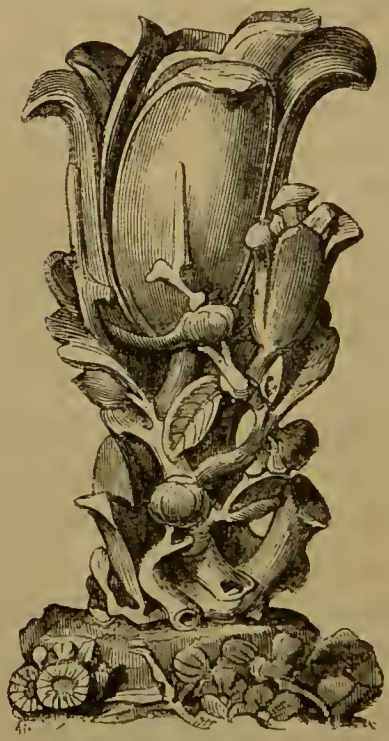


Fig. 189. Vase of pink agalmatolite. China.

Debruge-Labarte collection of a vase enriched with bas-

* The beautiful white coloured vases imported from India, and which are said to be jade, are in Count Bournon's opinion of the nature of prehnite.

reliefs and detached chimerical figures, executed with great spirit (Fig. 187).

Among the soft stones employed by carvers, the Chinese give the preference to the agalmatolite, vulgarly called soapstone (Figs. 188, 189). This stone, which has also received the names of pagodite, figure-stone, graphic talc, steatite, is compact, of a fatty lustre, soft to the touch, easily scratched by steel. Its colours are very varied.*

The goldsmith's art.

Documents are wanting to enable us to appreciate the state of the goldsmith's art in the East. It is not from a small number of specimens that an opinion can be formed. The fine silver cup (Fig. 190) will give a favourable idea of the skill of the Chinese goldsmiths in chasing.

Fig. 190. Chased silver cup. China.

The Hindoos have furnished us with bracelets and other ornaments (Fig. 191), which show the skilfulness of their goldsmiths in the art of chasing.

In Persian jewellery some parts are always to be found enamelled. The Moslems attach great value to engraved stones, but the representation of figures being, as before observed, prohibited, the engraving is limited to inscriptions. Of these there are two kinds: the inscription is either

* Identical with talc stéatite compacte *Haüy*, Steatite pagodite, name given to it by Brongniart, from its being always brought from China in the form of little grotesque figures; hence also its Greek name agalmatolite. Bildstein, *Werner;* Agalmatholithe *Klaproth;* "vulgairement pierre de lard des Chinois, pierre à magots." *Haüy*, t. iv. p. 511.

reversed, so as only to be read upon the impression, which shows it was intended to serve as a seal or signet, or else the characters are arranged in their natural order, which is then an indication that the person who ordered it, had no other intention than to carry about him certain words for which he had a peculiar veneration.* When these stones are marked under the influence of some constellation, and they bear the name of God, of Mahomet, of angels, or some other holy personage, they are known by the name of talisman.

Fig. 191. Thumb-ring of jado, decorated with gold filagree and incrusted with rubies. Hindoo work.

The manufacture of porcelain in China is of high antiquity; the Chinese annals do not mention the name of its inventor.† It having been the custom in China, from the time of Yao and Chun, who governed that empire more than 2200 years before the Christian era, that each town should cause a record to be kept of the principal facts relating to it, and likewise preserve in its archives the name of each of its inhabitants distinguished in arms, in letters, or by means of some invention, the Chinese antiquaries infer, from the silence of the annals respecting the invention of porcelain, that its manufacture is anterior to the reign of these emperors.

The Keramic art.

A discovery has been lately made which appears to confirm the high antiquity of porcelain. Several bottles of this fine pottery, inscribed with Chinese characters, have been found in the excavations made among the ancient monuments of Egypt, and Professor Rossellini is even affirmed to have found one himself, in a tomb which had not been previously opened, and which he considered as belonging to the time of the Pharaohs. Such important facts required a rigorous examination; the Arabs, when closely questioned, admitted that they had never before met among the ruins with vessels of a similar kind;

* Reinaud, *Mon. arabes*, etc., t. i. p. 29.
† Du Halde, work before quoted, t. ii. p. 177.

that the greater number of these bottles came from Qous, Qeft, and Qosseyr, marts in the Red Sea, of the commerce of India. M. Prisse d'Avesnes, desirous of correcting an error which he had involuntarily been the means of disseminating, by giving to N. L'Hôte two of these vases for the Louvre, where they appear now under the title of "Chinese vases found in the Egyptian tombs," submitted them to the examination of Messrs. Stanislas Julien, and Pauthier, who recognised that the inscriptions painted upon them were written in cursive characters, known under the name of *thsao*, and which only date from the IInd century of the Christian era. M. Pauthier has even been able to decipher, upon a vase of this kind published in London, a verse taken from a Chinese author, who lived in the beginning of the XIth century.* Without damaging the high antiquity of the porcelain manufacture in China, we must dismiss any argument derived from these Egyptian bottles.

M. Stanislas Julien, having been consulted by M. Brongniart upon the question of the antiquity of porcelain, devoted himself to researches among the Chinese authors, which have brought him to the conclusion, that porcelain was common in China in the time of the Han, B.C. 163; that it was in use under the Souï dynasty (from A.D. 581 to 618); that this ancient porcelain, although of a pure white, was manufactured with a common material, and that it was only under the dynasty of the Song, from A.D.

Fig. 192. Blue and white dish. Coll. Marryat.

* *Revue archéologique*, t. ii. p. 743.

960 to 1278, that porcelain began to be made with fine materials, and to acquire any kind of perfection.*

Father D'Entrecolles, who resided in China for a long period in the beginning of the XVIIIth century, informs us that the ancient porcelain relics, which were eagerly sought after by the Chinese antiquaries, bear no inscription which can show the date of its manufacture, and that it was only under the dynasty of the Thang (from A.D. 618 to 907) that it began to be used by the emperors.†

It was not until the beginning of the XVIth century that Chinese porcelain was generally imported into Europe, and we know of no document that can give the certainty of any specimens having been introduced before that epoch; yet this would not be impossible. In fact, the celebrated Arabian traveller, Ibn-Bathoutha, who was born at Tangier, and penetrated into China about 1345, asserts, in his account of his travels,‡ that the Chinese pottery was exported as far as the countries of the Magreb (the Barbary States). If this fact be correctly stated, some pieces of porcelain may have easily been carried into France, Spain, or Italy.

At least, it is certain that this beautiful pottery was known by reputation in Europe long before it was imported by the Portuguese. The first writer who appears to have spoken of it is the Arabian geographer, Abou-Abd-allah-Mohammed ben Mohammed-el-Edrisi, who lived in Sicily at the court of Roger II., and who published, in 1154, by order of that prince, an extensive work upon geography.§ In describing the more southern parts of Indo-China, after having spoken of the port of Khankou, which he says is situated on a river, "par lequel on remonte dans la majeure partie du pays du Bahgbough, qui est le roi de la Chine," and he proceeds to trace the itinerary from that port to the city of Djankou, of which he adds, "Celle-çi est une ville célèbre . . . . on y travaille le verre Chinois."‖ This Chinese glass can be

* Brongniart, *Traité des arts céramiques*, t. ii. p. 479.

† Du Halde, work before quoted, p. 202.

‡ Reinaud, *Relation des voyages faits par les Arabs et Persanes dans l'Inde et à la Chine*, t. ii. p. 23.

§ Some Arabian travellers had penetrated into China from the IXth century (see the work above quoted of M. Reinaud); but there is no reason to suppose that their narratives were known in Europe.

‖ Amedée Jaubert, *Géographie d'Edrisi*, t. i. p. 99.

nothing else than porcelain, which, owing to its translucidity, a quality not met with in any other kind of pottery, would have, to an European eye, very much the appearance of glass. Further on, when Edrisi arrives at the description of the eastern part of China, he says, speaking of the city of Sousa: "On y fabrique le ghazar chinois, sorte de porcelaine dont rien n'égale la bonté." And adds: "Dans les pays que nous décrivons, il n' y pas d'arts plus estimés que ceux de potier d'argile et de dessinateur." *

Marco Polo also had described the beautiful pottery of China in the narrative of his travels, which he made in the last year of the XIIIth century, and which quickly was dispersed into all parts of Europe. In chapter clvii., where he speaks of the port of Zantan or Zaitem, and the province in which that port is situated, he says: "En ceste provence, en une cité qui est appelé Tinugui, se font escuelle de porcellaine grant et pitet les plus belles qe l'on peust deviser. Et en une autre part n'en s'en font se ne en cest cité." †

Lastly, Father Jordanus, appointed Bishop in India by a bull of John XII., in 1330, and who lived a long time in that country, in relating that he had heard of the Chinese Empire, "De Magno Tartaro," spoke in these terms of the Chinese porcelain: "Alia non sunt quæ ego sciam in isto

* Amedée Jaubert, *Géographie d'Edrisi*, t. i. pp. 193, 194. The Arabian word which M. Jaubert has translated by "porcelain," is *fakhkhar*, which means nothing else than pottery. There is no doubt that Edrisi meant only to speak of porcelain, and the sense of the author is well rendered; we wish to remark that the word used by Edrisi has no resemblance in sound whatever with that of porcelain, and that hence this word does not come from the Arabic.

† MS. Bibl. roy. no. 7367, published by the Société de Géographie, in the *Recueil de Voyages et de Mémoires*, t. i. p. 180. This manuscript, to all appearance was written at Venice in 1037, for Charles of France, comte d' Artois, brother of Philippe le Bel (see *Recueil de voy. et de Mém.*, published by the Société de Géographie, t. iv. p. 409); it would therefore be contemporaneous with Marco Polo. We see that this celebrated traveller already gives the name of *porcelain* to the Chinese pottery, and it probably was he who thus named it. It is not, therefore, as had been long thought, from the Portuguese "porcella," their term for the cowrie shell, that the name has been derived. We have said, p. 315, this word of *porcelaine* is found in the inventories of the French princes of the XIVth century, applied to a precious substance cut into cups and vases, and disposed so as to form a back-ground, to which were affixed objects in chased and enamelled metal; it appears to us that this substance could not be the shell which has thus received the name of porcelain, as, in the description given by those who drew up these inventories, they almost always qualify it with *pierre*, "une escuelle d'une pierre appelée pourcelaine," which would certainly not have been the case had they only a shell before their eyes.

imperie digna relatione, nisi vasa pulcherrima, et nobilissima, atque virtuosa et porselata."*

The finest Chinese porcelain† has been made for many years in a large village in the province of Kiang-si, called King-te-tching, which only requires the enclosure of walls to obtain for it the name of a city. When Father D'Entrecolles lived there,‡ one hundred and fifty years since, it contained not less than a million of inhabitants. Nor does it appear to have lost its importance. When the English embassy, under Lord Macartney, passed near this place, on their way from Pekin to Canton (1794), they were assured that there were three thousand porcelain furnaces lighted there at once. (Fig. 192.)

Fig. 193. Porcelain double bottle. China.

Porcelain is still made in the neighbourhood of Canton, but it is far inferior to that of King-te-tching.

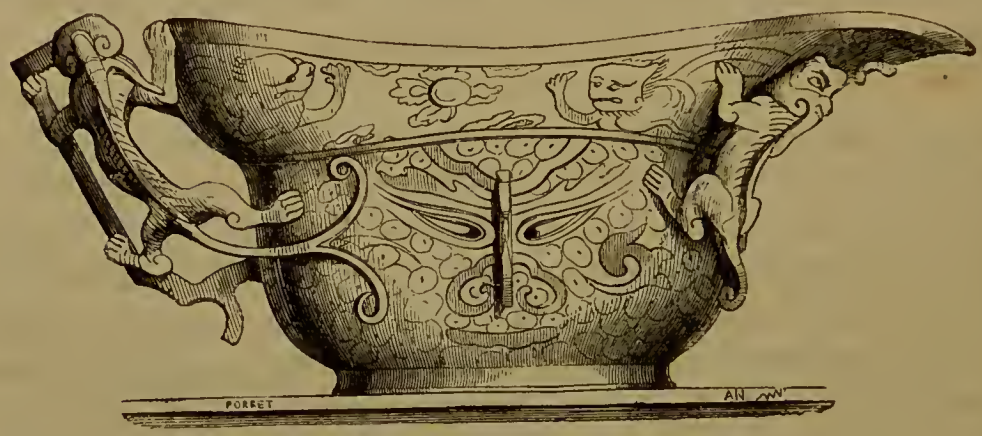


Fig. 194. Porcelain cup, with kylins. China.

The Chinese porcelain presents many varieties in its manufacture (Fig. 193); the processes practised by the Chinese

* Jordanus, *Mirabilia descripta*, published by the Société de Géographie, *Rec. de voy. et de Mém.* t. iv. p. 59.

† We have mentioned above, p. 317, of what materials Chinese porcelain was composed.

‡ Du Halde, work before quoted, t. i p. 144, t. ii. p. 177.

to vary the decorations of their beautiful pottery, and to give it its singular character, are innumerable (Fig. 194). We may further remark that the ancient porcelain, especially that anterior to the time when large quantities began to be manufactured for the European market, is much esteemed even in China. It is frequently sought after by the Chinese antiquaries, and has now become, as an article of commerce, as rare in China as in Europe.

Fig. 195. Bottle, gourd-shaped. Japan. Coll. Marryat.

The Japanese, also, manufacture a very fine porcelain (Fig. 195). It is difficult to determine the certain characteristics which distinguish it from that of China. It is generally admitted that the porcelain of Japan is whiter, has a better glaze, and greater translucidity. The paintings which decorate it rarely represent figures; they have generally flowers for subjects. Their colours have much brilliancy.

The armourer's art.

Oriental arms offer great variety in their decoration. Those of Indo-China are remarkable for fine chasings upon gold and silver; those of the Malays for carvings in wood. India excels in fine damascene work, and Persia in enamels (Figs. 196, 197, 198, 199).

A character peculiar to Moslem arms is this, that they almost always bear inscriptions. On some we find a verse in honour of God and the saints, sometimes a moral or superstitious legend; on others, the name of the owner, or that of the maker of the piece. The custom of enriching arms with inscriptions, goes back to the earliest period of Islamism. Mahomet was in the habit of causing to be engraved upon his sabres this passage of the Koran: "Help comes from God." *

* Reinaud, *Monuments arabes*, &c. t. ii. p. 298.

The lacquer works of Japan and China (Fig. 202) are original productions, which however they may be counterfeited, are never to be imitated in Europe.

Lacquer work.

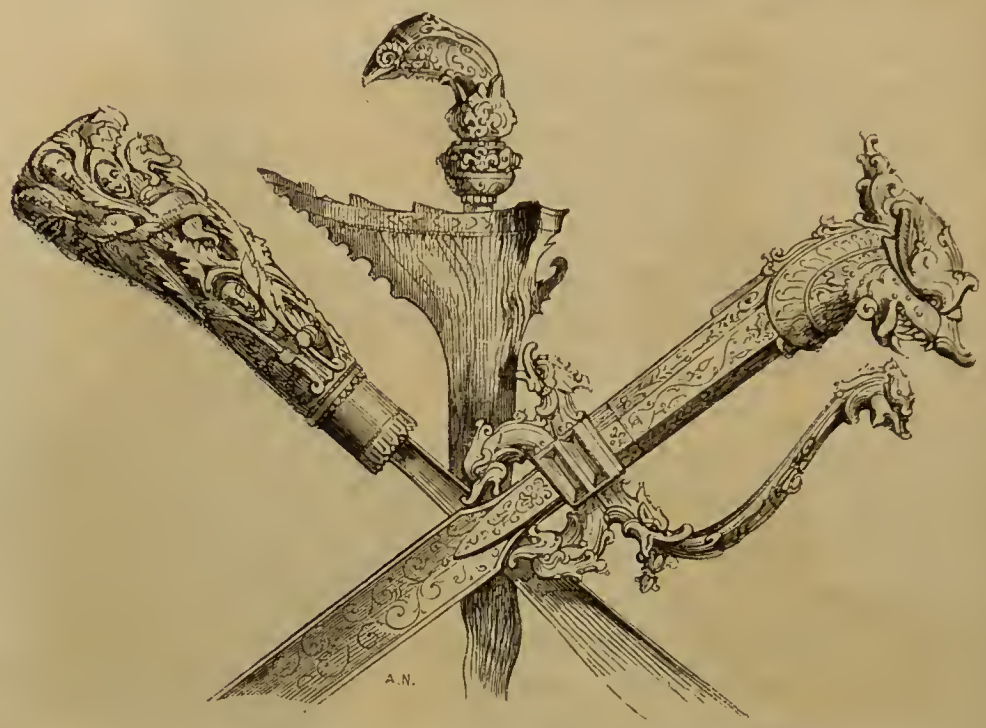


Fig. 196. Fig. 197. Fig. 198.
196. Hindoo sabre, damascened in gold and silver. 197. Ivory handled Malay knife.
198. Ivory handled Japanese cleavan.

These pretty objects, to which the name of lacquer-work has been given in Europe, are all made of wood, and before treating of the varnish which covers them, we must do homage to the skill of the Japan and Chinese cabinet-makers as well as to the delicacy and good taste of these charming works.

The varnish with which the Chinese cover their cups, boxes, and furniture, so varied in form and ornamentation, is a kind of gum they call *tsi*. It flows from trees resembling the ash of our climates, and is only extracted during the summer, from trees from seven to eight years old; which are then about fifteen feet high. In order to obtain the gum, several incisions are made in the evening in the bark of the tree round the trunk, without cutting the wood; and a shell, which supports itself, is inserted into each incision. The next morning, the contents of the shells are collected.* The

* Du Halde, work before quoted, t. ii. p. 174.

varnish is then placed in the open air in large wooden flat-bottomed, shallow vases, and stirred with a large spatula, in order that any water contained in it may evaporate. It is

Fig. 199. Tartar poignard.

Fig. 200. Cylindrical vessel, red lacquer, with subject in relief. China.

then poured out upon sheets of carded cotton, wrapped up in these sheets, and enclosed in pieces of cloth. In these double wrappings it is submitted to the action of a press, which causes it to flow through the two coverings. These latter details upon the preparation of the varnish, are neither in the work of Father Du Halde, nor in the memoirs of the missionaries, but have been supplied to us by the drawings of an album in the print-room in the Imperial Library at Paris (O—e, 39, c), which are accompanied by explanatory notes. It appears also, from these notes, that a drying-oil of tea and arsenic form part of the preparation of the varnish.

The varnish is used in two manners: the first, which is the more simple, consists in its immediate application upon the wood. After this has been well polished by various means, and coated with a kind of oil called by the Chinese *tong-yeou*, it is covered when this oil is thoroughly dry, with several coats of varnish, laid on by degrees, until the polish resembles that of a looking-glass. When the work is dry,

it is painted in gold and silver with subjects, birds or flowers, and lastly a thin coat of varnish is laid over the painting to give it brilliancy and to preserve it. The other method is less simple: it consists in first coating the work

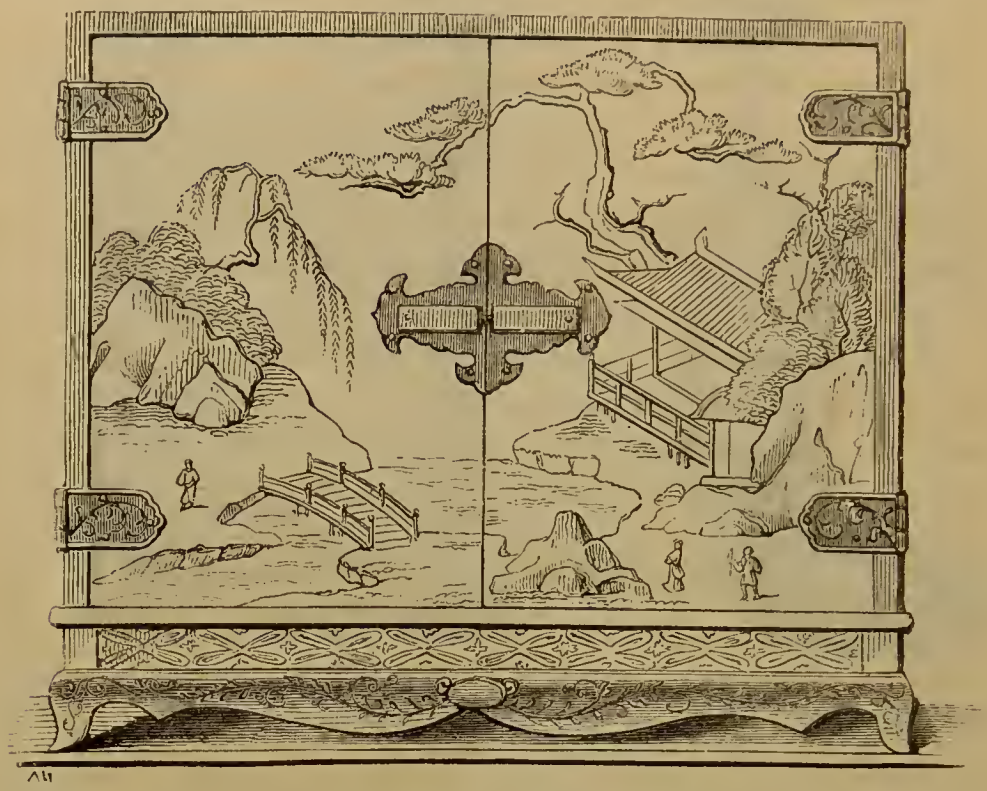


Fig. 201. Ancient Japan cabinet, black lacquer, painted in gold.

with a kind of mastic made of brown paper and lime, which forms the ground upon which the tong-yeou, and afterwards the varnish are applied.* This mastic is also the material used for the drawings in slight relief often found upon Chinese lacquer-work (Fig. 200).

The lacquer-work of Japan is very superior to that of China (Fig. 201). In the beginning of the XVIIIth century, when lacquer-work was much prized in Europe, its importation into China formed one of the principal branches of commerce between that country and Japan. The Chinese afterwards carried this lacquer-work to Manilla and Batavia, whence it was sent into Europe.†

The finest Chinese varnish is procured from the provinces of Kiang-si and of Ssé-tchouen. The best Chinese manufac-

* Du Halde, t. ii. p. 176. † Ibid. p. 171.

tory is at Nankin. Lacquer-work is made also at Tong-Ting.*

Furniture and objects of domestic use.

Among all the furniture and objects of domestic use, the metal vessels are among the most interesting, considered as works of art.

Chinese bronzes.

The art of casting bronze, and forming it into vessels, is of the highest antiquity in China (Fig. 202). The Chinese historians say, that Yu, who was associated on the throne with Chun, more than 2200 years before the Christian era, caused nine brass vases to be cast, upon each of which, he had engraved the map and description of one of the nine provinces of the empire.

For many years past, the ancient bronze vases have been collected and preserved in the museums and private collections of China, and the enquiries of archaeological science, which is much cultivated in that country, have been principally directed to a knowledge of ancient vases.† The engravings and descriptions of the ancient vases, deposited in the Imperial Museum, were published in forty-two volumes folio, by order of the emperor Kien Soung, who reigned from 1736 to 1796. This description is accompanied by a profound criticism, which refers the manufacture of those vases to the early times of the dynasty of the Chang (1766 years before our era), and this appreciation is often based upon the contents of the inscriptions which occur on the vases themselves. The Imperial Library at Paris possesses a copy of this magnificent work.

Fig. 202. Bronze vessel (Ting). China.

* Du Halde, t. ii. p. 173.

† Pauthier, work before quoted, pp. 50, 201.

Among the bronze vases in the Debruge-Labarte collection, was one of great interest. It bears an inscription establishing its manufacture under the dynasty of the Ming, in the period of Siouen-te, corresponding to the years 1426 to 1436 of the Christian era. Now during this period, in the reign of the emperor Siouan-tsoung, the Imperial palace took fire, and the violence of the conflagration, which lasted several days, was so great, that immense quantities of gold, silver, and brass, were melted by the flames and all these metals mixed together. The Chinese annals add, that a number of vases were made from the metal obtained by this alloy. These vases are much esteemed in China and fetch a high price.* May we not, without rashness, suppose that the vase in question has been made of this precious alloy; the finish of the casting, and the fine colour of the metal, would appear to furnish proofs, corroborated by the inscription and date.

Arabian vases.

Among the various pieces of Oriental furniture, there are none of greater interest than those belonging to the Arabs of the middle ages, by whom literature, arts, and sciences, were cultivated with success. This interest arises from two causes. In the first place, it is useful to seek for analogies with regard to manufacture and ornamentation between the artistic productions of the Arabs and those of the European nations, in order to ascertain if the works of the Arabian artists exercised any influence upon art in Europe, either in the XIth century, the period of its transformation, or later, at the end of the XIIth, the period of the adoption of the Gothic style. The second source of interest is derived from the beauty of the works themselves.

The attention of the learned has long been devoted to monuments of Arabian architecture, but only within the last few years has it been directed to the study of their industrial arts. Specimens of these are extremely rare; it was needful, in the first place, to seek them out; and then to explain the inscriptions, in order to discover, if possible, the place and period of their manufacture. Few persons could devote themselves to this study, which required a profound knowledge of Asiatic languages.

* Du Halde, t. i. p. 512.

Yet, already, materials have been prepared, and specimens been described; and if the scarcity of those existing admits of no detailed opinion being formed upon the interesting points of enquiry suggested by such an examination, the researches of the learned have at least furnished the date of the pieces preserved in the museums and collections, and have given information concerning manufactures of which we possess most beautiful productions.

Thus, our learned orientalist, M. Reinaud, in his excellent work upon the collection of the Duke de Blacas, has made us acquainted with a large number of engraved stones, arms, vases, and other objects of Arabian manufacture; he has explained the inscriptions upon them; and has added to those documents, so interesting in themselves, much valuable information on the history, the religion, the manners, the customs and domestic life of the Moslem. By this means he has enabled archaeologists, of whose research the especial objects have been questions of art connected with these productions, to study them with advantage and establish points of comparison. M. Adrien de Longpérier has also devoted himself to the study of the artistic productions of the Arabs, and in several articles inserted in the Revue Archéologique he has carefully described the fine cup found at Fano, now placed in the Cabinet of Medals in the Imperial Library at Paris, and several other pieces of which he has explained the inscriptions himself.* Approaching the question, as to whether in the middle ages artists of the West borrowed any decorations from the Arabians, he has proved, by reference to a certain number of monuments, that characters of Arabic writing, more or less disfigured, have been employed by Christian artists as subjects for decoration.†

The Arabian vases are generally of laten, or of an alloyed metal composed of copper and tin. They are enriched with ornaments chased or stamped and embellished with knobs, arabesques, and even with subjects rendered by a fine damask-work of silver. We can find a considerable number of mosaics executed in this alloy, the backs of which have received the same kind of decoration.

* *Revue archéologique*, t. i. p. 538; t. iii. p. 339. † Ibid.

Among the finest and most curious productions of this manufacture, we should mention several pieces in the collection of the Duc de Blacas, the pretty cup of the Imperial Library at Paris, and particularly the magnificent vase known under the name of the vase of the Château de Vincennes, preserved in the Museum of the Louvre, and which, according to tradition, was brought from the East by St. Louis.

The damask-work with which the works of Arabian manufactures are decorated, is executed by two different processes. Sometimes the metal is slightly tooled out (champlevé) in the exterior form of the figure to be represented; a thin sheet of silver is applied upon the champlevé part, and fixed either by strong pressure, or by the turning over of the metal of the field upon the edges of the silver; the interior details of the designs are afterwards chased upon the silver. At other times, the ornaments which are left projecting by means of a chased work, and the lowering of the ground, were pricked or pounced over their surface, the silver was then fixed upon the ornaments in relief by strong pressure, which forcing it into the little holes or pricks, attached it firmly to the ground.

The first of these processes, already described as having been adopted by the European artists in damascene work, has been used in the execution of the great vase of the Louvre; the second, in the cup of the Imperial Library. This last process does not appear to have been employed in the West. We have before mentioned* the manner in which the Italian artists executed damask in relief.

The studies made, until now, upon the existing monuments of this splendid Arabian manufacture, appear to leave no doubt of the place and period of its fabrication.

Thus, among the specimens in the collection of the Duc de Blacas, M. Reinaud has noted a very beautiful vase enriched with ornaments and very curious subjects, bearing an inscription which informs us that it was made at Moussoul, in Mesopotamia, by Schogia, son of Hanfer, in the year 629 of the Hegira (A.D. 1232).† Upon a talismanic mirror of the same collection, the learned orientalist ‡ has deciphered

* See p. 189. † Reinaud, *Monuments arabes*, &c. t. ii, p. 423. ‡ Ibid. t. ii. p. 404.

an inscription in honour of the sultan Aboufadl Ortok-Schah, son of Kheder, prince of the house of the Ortokides, who reigned over the city of Hisn-Kaifa, towards the end of the XIIIth century. Lastly, in his numerous scientific digressions beyond the contents of the collection, he acquaints us with an inscription upon a fine vase in the Louvre, which runs thus: "Made by Mohammed, son of Zin-Eddin, upon whom may God have mercy." *

Fig. 203. Ewer of Mesopotamian work, brass, inlaid with silver. XIIth century. British Museum.

M. de Longpérier, in his monograph upon the cup of the Imperial Library, has, on his part, proved that this vase which, besides, has a great resemblance to that of the Duc de Blacas, must have been made in Mesopotamia, in the first half of the XIIIth century, either for the prince Malek-el-Aschraf, who reigned over the city of Miafarkin, from 1215 to 1220, and whose name is inscribed upon the cup, or for a prince of the same name, his nephew, who died in 1259.† M. de Longpérier has likewise described a mirror brought from Alexandria, the inscriptions and ornaments of which denote the XIIIth century.‡

The name of the city of Moussoul, which occurs upon the vase of M. de Blacas, had already made the city known as one of the centres of the manufacture of metal utensils in damascene work; a document, the discovery of which is also due to the investigations of M. Reinaud, confirms this first indication. In a work of Ibn-Sayd († 1273), an Arabian

* Reinaud, *Monuments arabes*, &c., t. ii. p. 423.
† *Annales archéologiques*, t. i. p. 538.
‡ Ibid. t. iii. p. 338.

geographer,* we read a passage which M. Reinaud has translated, and which runs thus: "The inhabitants of Moussoul show extreme skilfulness in the different arts, particularly in the manufacture of copper vessels which are used at table. They export these vessels, and they are used by princes."

From putting these two documents together, it evidently results that utensils of damasked metal were made in the the XIIth and XIIIth centuries in the manufacturing towns of the Al-Djezireh (Mesopotamia), and especially at Moussoul. The perfection of the workmanship would lead to the supposition, that this kind of manufacture had been long carried on in those countries.

It is thus that we find confirmed, by the writings of Arabian authors, and by the monuments themselves, the eulogiums bestowed upon the Arabs by Theophilus, in the XIIth century, for their skill in the art of making and decorating metals.†

A vase in the Debruge-Labarte collection is deserving of particular attention. Upon the neck is an Arabic inscription, which states that it was executed by Zyn-Eddin. Would this artist be the father of Mohammed who signed the vase of Vincennes, describing himself as the son of Zyn-Eddin? This inscription, rendered by a silver damask-work in relief, is divided into four verses at equal distances. The interval between each verse is filled up with a scroll of these delicate flowers with three distinct petals, so often met with in the Romanesque decorations, and sometimes even in those of the XIIIth century. These flowers will be found in several of the Limoges enamels of the XIth and XIIth centuries. From their similarity, we may then establish that these have been borrowed from Oriental decoration by the Western artists of the period of the revival of art.

The vase in question presents one more peculiarity; that, in the middle of the cover surrounded by arabesques, is a shield with an eagle in chief. These arms, which evidently belonged to a European family, prove this vase, manufactured in

* MS. Bibl. roy. suppl. arabe, no. 1503, fol. 73, v.
† Theophili, *Divers. art. schedula*, in praef.

Asia, to have been intended for Europe, and probably made by order of a prince or noble of the West. This peculiarity would confirm the narrative of the geographer Ibn-Sayd, who, in his work, has informed us that the metal vessels of Moussoul were exported for the use of princes.

Fig. 204. Votive diptych. On one tablet Æsculapius and Tolesphorus; on the other, Hygieia. IInd century. Fejérváry collection.

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* The term crosier is misapplied by modern writers to the crook-shaped pastoral staff of a bishop, whereas the crosier, strictly so called, is the cross on a staff borne by an archbishop; the patriarch bears a double cross, and the pope has the triple assigned to him.

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* This collection was begun in 1830 by M. Debruge Dumenil, at whose death, in 1838, it became the joint property of his son and his son-in-law M. Jules Labarte, by whom it was considerably increased; and as an introduction to a descriptive catalogue of the objects of art it contained, M. Labarte wrote the Treatise of which this work is a translation. The collection has since been dispersed.

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* The brothers of Charles V. were Louis, Duke of Anjou (to whom the crown of Naples was bequeathed by Queen Joanna), John, Duke of Berry, and Philip the Bold, Duke of Burgundy.

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